HANDBOOK FOR BOYS

BOY SCOUTS OF AMERICA

50¢

YOUR PASSPORT TO HONORS

. . . the Official Boy Scout Uniform

Dashing, trim, symbolic of the great Scout Movement, the Boy Scout Uniform is your passport to Scouting honors and the nation's esteem. Everybody knows about Scouting and the ideals of its action-packed program for red-blooded boys. That's why the nation admires the boy in the Boy Scout Uniform. The nation knows the noble heritage that Scouts carry on, the knightly code by which Scouts live, the Oath and Law to which Scouts pledge themselves. The spirit of Washington is in every Scout's fibre, the blood of pioneers and explorers in their veins. No wonder doors are open to Scouts. No wonder the Official Boy Scout Uniform is an immediate passport to honors and esteem.

NATIONAL SUPPLY SERVICE
BOY SCOUTS OF AMERICA
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"DO A GOOD TURN DAILY"

BOY SCOUTS OF AMERICA

Chartered by Congress

MY SCOUT HISTORY

Name .....

Troop No. ..... City ..... State .....

Pack No. ..... City ..... State .....

Cub ..... 19 .....

Wolf ..... ; Bear ..... ; Lion .....

Tenderfoot Scout ..... 19 .....

Second Class Scout ..... 19 .....

First Class Scout ..... 19 .....

Star Scout ..... 19 .....

Life Scout ..... 19 .....

Eagle Scout ..... 19 .....

Veteran Scout ..... 19 .....

Rank reached .....

Was Assistant Patrol Leader .....

Patrol Leader .....

Senior Patrol Leader .....

Cub Den Chief .....

Junior Assistant Scoutmaster .....

Assistant Scoutmaster .....

.....

.....

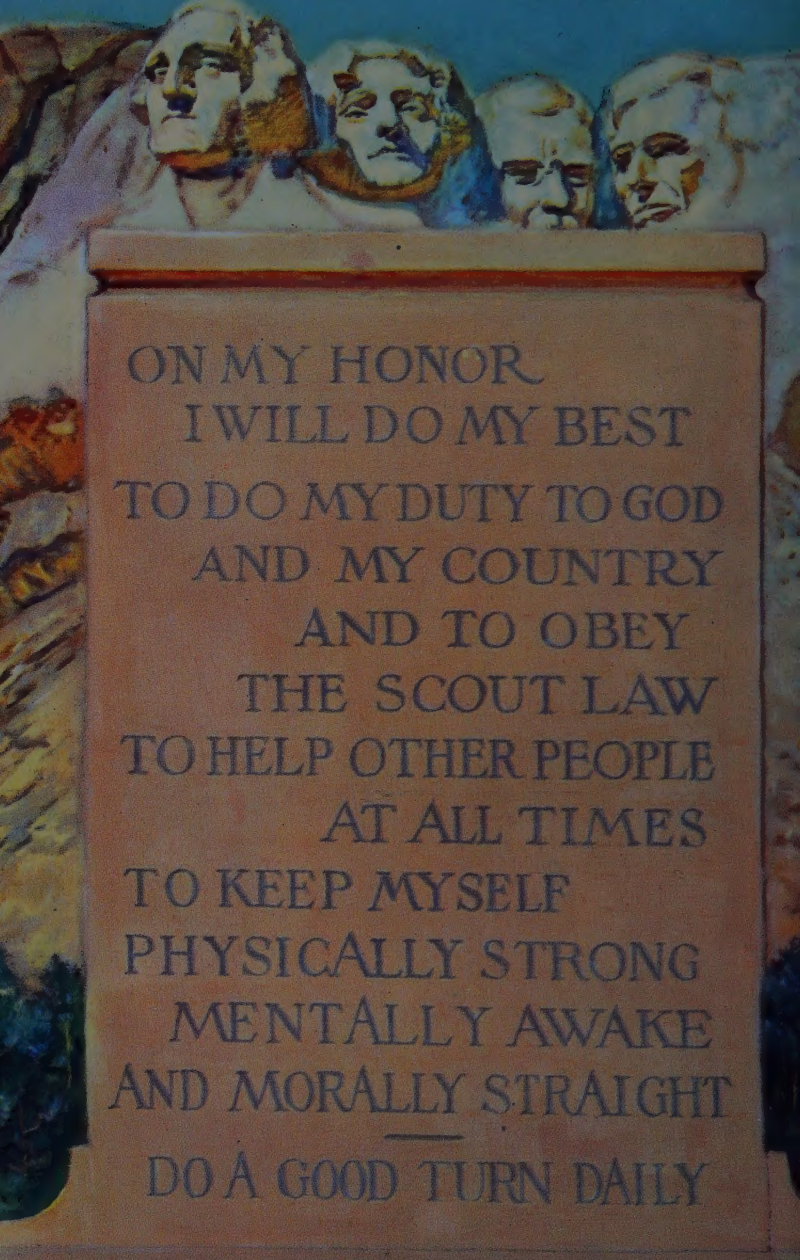
Became Scoutmaster .....

Also .....

A SCOUT IS TRUSTWORTHY
LOYAL
HELPFUL
FRIENDLY
COURTEOUS
KIND

A SCOUT IS OBEDIENT
CHEERFUL
THRIFTY
BRAVE
CLEAN
REVERENT

DUTY TO GOD
DUTY TO SELF
DUTY TO COUNTRY


ON MY HONOR
I WILL DO MY BEST
TO DO MY DUTY TO GOD
AND MY COUNTRY
AND TO OBEY
THE SCOUT LAW
TO HELP OTHER PEOPLE
AT ALL TIMES
TO KEEP MYSELF
PHYSICALLY STRONG
MENTALLY AWAKE
AND MORALLY STRAIGHT
DO A GOOD TURN DAILY

A SCOUT IS
TRUSTWORTHY
LOYAL·HELPFUL
FRIENDLY
COURTEOUS
KIND·OBEDIENT
CHEERFUL
THRIFTY
BRAVE · CLEAN
REVERENT
BE PREPARED

BOY SCOUT BADGES

Our Uniform, Badges and Insignia, as well as Hiking and Camping, are dramatic factors in the Game of Scouting. Our Badges and Insignia, while intrinsically of little value, are important because they represent essentially personal achievement; or, as in the case of some of our Insignia qualities of personality and character which warrant designation for specific responsibility for leadership. We should all cooperate in constantly emphasizing these facts about Scout Badges and Insignia as contrasted with that kind of insignia or awards used in connection with competition. Scouting does not promote competition in its scheme of awards. We recognize achievement by the individual in meeting a fixed standard.

The chart in this section indicates the proper way for wearing Badges and Insignia. They should be checked in all inspections.

Patrol Medallion

Troop Numeral

25 Year Veteran Troop Numeral

Lone Scout Medallion

Community Strip

Universal (Scout)

1 Year Service Star

5 Year Service Star

10 Year Service Star

Cub Service Star

Universal (Cub)

Press Club

Organizer

Attendance Pin

Gold Quill

Standard Troop Star

Tenderfoot

Second Class

First Class

Star Scout

Life Scout

Eagle Scout

Bronze Palm

Gold Palm

Silver Palm

Tenderfoot Achievement

Achievement No. 1

Achievement No. 2

Asst. Patrol Leader

Patrol Leader

Senior Patrol Leader

Junior Assistant Scoutmaster

Cabin Boy

Musician

Bugler

Troop Librarian

Scribe

Quartermaster

5 Year Veteran

10 Year Veteran

15 Year Veteran

Eagle Scout

20 Year Veteran

25 Year Veteran

30 Year Veteran

Honor Medal

Assistant Scoutmaster

Scoutmaster

Layman

Troop or Camp Physician

Troop Chaplain

Den Mother

Assistant Camp Director

Camp Director

Chief Camp Director

Den Chief

Scouter's Training Award

Neighborhood Scout Commissioner

Asst. Field & Asst. District Scout Commissioner

District & Field Scout Commissioner

Scout Commissioner

Local Council Employee

Asst. Field & Asst. District Scout Executive

coutmaster's Key

Field & District Scout Executive

Assistant Scout Executive

Scout Executive

President, Local Council

Past President, Local Council

Special National Field Scout Commissioner

National Staff Officer

Deputy Chief Scout Executive

Chief Scout Executive

Silver Beaver Award

Member National Council Executive Board

National Scout Commissioner

President, National Council

HOW TO WEAR BOY SCOUT BADGES AND INSIGNIA

Metal Badge of Rank worn on hat (Tenderfoot, Second Class, First Class, Star, Life, Eagle, Achievement, Sr. Patrol Leader or Jr. Asst. S.M.)

Den Chief's Shoulder Cord right shoulder encircling sleeve.

Patrol Medallion worn on right sleeve — top 2 inches below shoulder seam.

"Boy Scouts of America" embroidered in red

Service Stars ⅜ inches above the seam of left pocket flap, point up, centered above pocket button, ¾ inch from the center to center of stars..

Community Strip worn on left sleeve along the shoulder seam centered on the arm.

Troop Numeral on left sleeve, top two inches below shoulder seam and centered on the arm.

lanyard optional.

Eagle Badge pinned above left breast pocket, not on flap, centered unless Honor Medal is worn.

YOUR PASSPORT TO HONORS

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sleeve, top 4 inches below shoulder seam.

Embroidered Badge of highest rank centered on left pocket. If metal Badge of rank is worn on shirt it is centered on left pocket, covering embroidered Badge if worn.

SCOUT REGISTRATION CARD

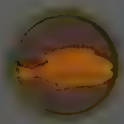
Your Boy Scout Registration Card shows you are a Scout. It gives you the privilege to wear the Uniform of Scouting. It is your credential when called into emergency service, and your letter of credit when appearing before the Court of Honor to receive your Badges earned on the trail of Scout Advancement. In buying an Official Uniform, you must have your Registration Card. Scout Distributors are forbidden to sell you restricted Scout Equipment without it. Be safe. Carry your Registration Card wherever you go.

MERIT BADGES

Our Merit Badges are colorful and it is with pride that we are able to bring into our Handbook their beauty and attractiveness by use of this color section. We hope it will stimulate interest and lead to further exploration in our Merit Badge field which has, over the years, brought so much satisfaction to so many thousands of boys. Yes, we know that the voluntary application on the part of Scouts in qualifying for the award of these colorful badges has led many to discover things which they can do with satisfaction and success and contributed to their selection of a life work.

Many of the Badges are awarded for the development of skills as well as knowledge which make possible helpfulness to others, and the effectiveness of our Motto "BE PREPARED."

Agriculture



Angling

Animal Industry

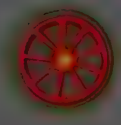
Archery

Architecture

Art

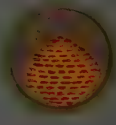
Astronomy

Athletics



Auto-mobiling

Aviation



Basketry

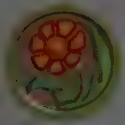
Bee Keeping

Beef Production

Bird Study

Blacksmith-ing

Bookbinding



Botany

Bugling

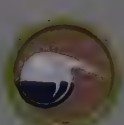
Business

Camping

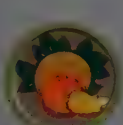
Canoeing

Carpentry

Cement



Chemistry



Citrus Fruit Culture

Civics

Coin Collecting

Conservation

Cooking

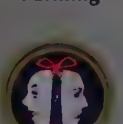
Corn Farming

Cotton Farming

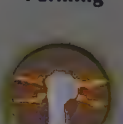
Cycling

Dairying

Dog Care



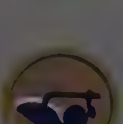
Dramatics



Electricity

Farm Home and its Planning

Farm Layout and Building Arrangement



Farm Mechanics

Farm Records and Book-Keeping

Finger Printing

Firemanship

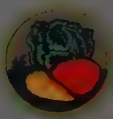
First Aid

First Aid to Animals

Forestry

Foundry Practice

Fruit Culture



Gardening

Grasses, Legumes and Forage Crops

Handicraft

Hiking

Hog and Pork Production

Horseman-ship

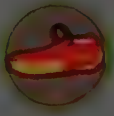
Indian Lore

Insect Life

Interpret-ing

Journalism

Landscape Gardening



Leathercraft

Leather Work

Life Saving

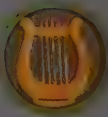
Machinery

Marksman-ship

Masonry

Mechanical Drawing

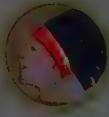
Metal Work



Music

Nut Culture

Painting



Path Finding

Personal Health

Photography

Physical Development

Pigeon Raising

Pioneering

Plumbing

Pottery

Poultry Keeping

Printing

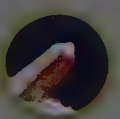
Public Health

Public Speaking

Radio

Reading

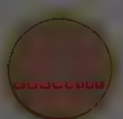
Reptile Study



Rocks and Minerals

Rowing

Safety



Salesmanship

Scholarship

Sculpture

Seamanship

Sheep Farming

Signaling

Skiing

Soil Management

Stalking

Stamp Collecting

Surveying

Swimming

Taxidermy

Textiles

Weather

Woodcarving

Wood Turning

Wood Work

Zoology

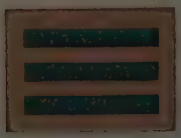
Rover Scout

Explorer Scout with Senior Titles

Long Cruise

Explorer 1st Honor

Quartermaster



Explorer 2nd Honor

Apprentice Sea Scout

Coxswain

Explorer Patrol Leader

Ordinary Sea Scout

Boatswain's Mate

Sea Scout Mate

Explorer Patrol Leader With 1st Honors

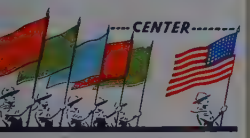
Explorer Patrol Leader With 2nd Honors

Able Sea Scout

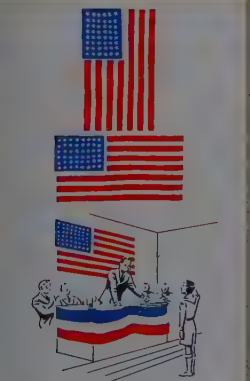
Boatswain

Sea Scout Skipper

THE FLAG CODE



MARCHING



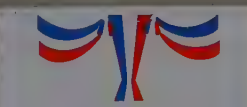
ON WALL

MOURNING FESTOON

ON STAFF

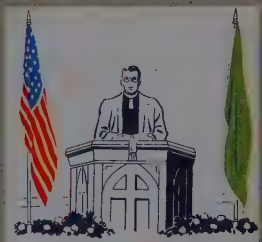
ON STREET

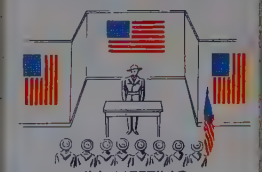
UNVEILING



THIS FOR DECORATING

WITH OTHERS





IN MEETING

ON CASKET

FOR DETAILS SEE PAGES 68-73

LITHO IN U.S.A.

The four Presidents, George Washington, Thomas Jefferson, Theodore Roosevelt and Abraham Lincoln, whom the genius, Gutson Borglum, has depicted on the face of Mount Rushmore, were men who had faith in God. They were participating citizens. May God give us strength, give us purpose, give us determination, to live our own life in harmony with the idealism for which Scouting stands. Then may each one of us do what he can as an individual to ensure that in addition to this monument of granite, the idealism for which these men stood is preserved forever in the actions and conduct of our people.

From Address of Chief Scout Executive at Mt. Rushmore, S. D., September 14, 1940

Revised Handbook for Boys

FIRST EDITION

Thirty-Third Printing. Four Hundred Thousand Copies.

See page 561 *for record of previous editions, totaling* 6,900,000 *copies*

BOY SCOUTS OF AMERICA

Incorporated February 8, 1910
Chartered by Congress, June 15, 1916

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William C. Menninger

* For Executive Board, see page 557

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2 Park Avenue, New York, N. Y.

THE SCOUTING TRAIL

This is the Trail that the Scout shall know
Where knightly qualities thrive and grow;
The trail of honor and truth and worth
And the strength that springs from the good brown earth;
The trail that Scouts, in their seeking, blaze
Through the toughest tangle, the deepest maze,
Till out of Boyhood the Scout comes straight
To Manhood's splendid and high estate!

—*By Berton Braley.*

HANDBOOK FOR BOYS

Published by

BOY SCOUTS OF AMERICA

Two Park Avenue, New York, N. Y.

Introduction

With great satisfaction I present to the boys of America this, the Thirty-third printing of the First Edition of the revised "Handbook for Boys." This Official Manual of the Boy Scouts, was published in 1910 and has during the period since been the country's best seller, with the exception of the Bible. Six million nine hundred thousand copies have been published.

We are now presenting our Handbook with new cover, new type and new cuts, but the text is substantially the same. I invite attention especially to the handsome 16-page colored insert emphasizing the ideals of Scouting and its Badges and Insignia, as well as how to display our country's Flag.

We are now establishing a new record in printing 400,000 copies in anticipation of our immediate needs. These Handbooks will be distributed through Boy Scout Councils, our regular Scout Distributors and through the American News Company by neighborhood newsstands, in all parts of America.

This book has been developed out of the experience of many people. Perhaps no other publication has a more interesting and unique history. I well remember the first edition, published in June 1911. Every technical detail was the subject of conference or correspondence with experts. Tons of typewriting paper were used in this process. We printed five thousand copies marked proof edition. We mobilized a list of some 4,600 names comprising everybody we could find in America who was related to boys' work. We submitted this proof edition to them and from their comments we made revisions and published the first edition. Perhaps never was a book published with so many contributors.

My own association with this book has been most intimate from the very beginning, and every illustration, sentence, indeed, every word has had my careful consideration before change has been authorized. Many

experts have contributed from their store of technical knowledge. Innumerable suggestions and constructive criticisms have been received from boys, Scoutmasters, Scout Commissioners, Local and Regional Scout Executives, Home Office Staff Members and others from time to time. All of these have had careful consideration—many hours have been involved in group discussion. Dr. H. W. Hurt has served as Editor, with the active cooperation of our Editorial Service and myself.

This Handbook is an interpretation of the Game of Scouting developed so that Scouts may carry on the Scout Program with the greatest joy and satisfaction and effectiveness. But it is more than that. It is a guide to the things that every boy of Scout age,—whether he lives in the city or country, no matter what his religion or creed may be, whether he is rich or poor—wants to learn and wants to do. It is based upon the experience of many men who have devoted their lives to a study of the out-of-doors, nature and conservation; to the knowledge of woodcraft, hiking and camping, of pioneering and of first aid and life saving. In it you will find wisdom that has been acquired through the ages as well as the latest and most up-to-date scientific information.

It is our hope that it will bring to every reader, as it has during the past thirty years, real satisfaction because of its attractiveness and the simplicity with which it shows how to do many worthwhile things. I go further and express the hope that through this book and the Game of Scouting, many boys will be aided in the development of their personality and character not alone for personal achievement and success but because of the satisfaction which they will enjoy in developing a capacity to care about other people, yes, to be helpful to other people at all times, and keep themselves physically strong, mentally awake and morally straight.

James E. West

Chief Scout Executive

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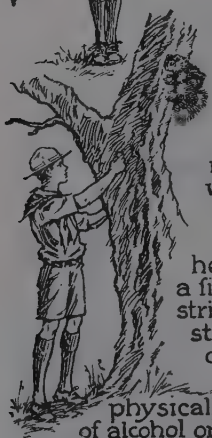
PART
I
WHAT IS
A BOY SCOUT?

CHAPTER I

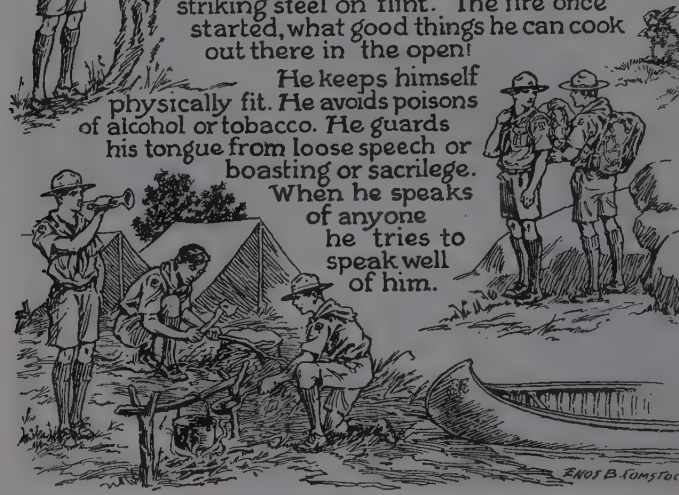
WHAT IS A BOY SCOUT?

A Scout! what fun he finds in hiking into the woods! He tells North from South by the stars, or East from West by the shadows.

He can talk to a brother Scout across a river by signaling. He knows the principal trees and birds and animals that he meets. He knows which are poisonous weeds or reptiles. He can find his way as did the Indians and pioneers before him.

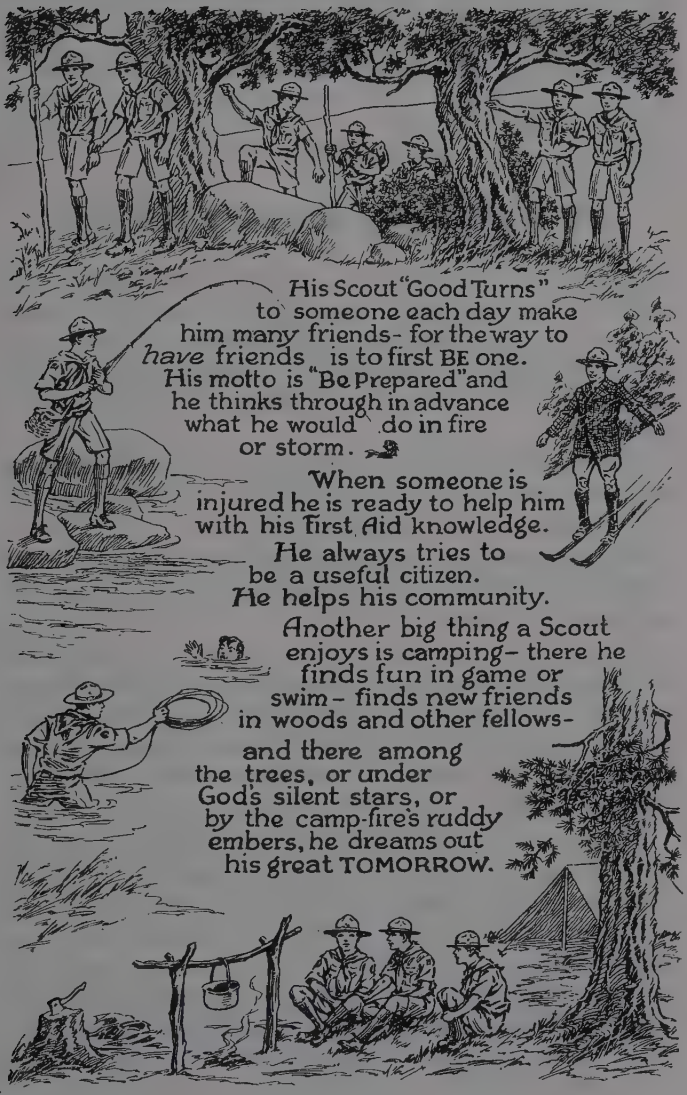


If matches are forgotten, he laughs and proceeds to kindle a fire by rubbing sticks together or by striking steel on flint. The fire once started, what good things he can cook out there in the open!



He keeps himself physically fit. He avoids poisons of alcohol or tobacco. He guards his tongue from loose speech or boasting or sacrilege. When he speaks of anyone he tries to speak well of him.

ENOS B. COMSTOCK



His Scout "Good Turns" to someone each day make him many friends- for the way to *have* friends is to first BE one. His motto is "Be Prepared" and he thinks through in advance what he would do in fire or storm.

When someone is injured he is ready to help him with his First Aid knowledge.

He always tries to be a useful citizen. He helps his community.

Another big thing a Scout enjoys is camping– there he finds fun in game or swim– finds new friends in woods and other fellows– and there among the trees, or under God's silent stars, or by the camp-fire's ruddy embers, he dreams out his great TOMORROW.

CHAPTER II

THE BOY SCOUTS OF AMERICA

America knows Scouting as a program of interesting, useful things for boys to do in their leisure time. These boys learn the mysteries of Woodcraft, of First Aid, Swimming and Life Saving, of Outdoor Cooking and Camping, of Signaling, Map Making, Hiking and Citizenship.

Like the Red Cross, The Boy Scouts of America is chartered directly by Congress and the President of the United States is its Honorary President.

The Scoutmasters are picked, trained local men, who give their time without pay because of their interest in boys and in America.

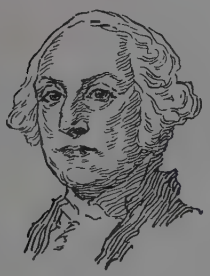
Scouting gives boys a chance to serve their community. Its activities not only give pleasure and knowledge, but they prepare to meet community emergencies. When tornadoes strike — when floods sweep — when earthquakes and fires and disasters come—the Scouts have always proved at once their readiness to serve.

Scouting is neither military nor anti-military. It carefully avoids political or commercial entanglements.

Scouting knows no race or creed or class. Troops are found in Catholic Parish, Jewish Synagogue and Protestant Church. It is available both to farm and city. It is found in schools—it serves the rich and poor alike. Its aim is to help each of these boys to become the best citizen that he can make of himself.

His daily Good Turn to some one is the Scout's effort to help the other fellow also make the best of himself.

Each year new thousands upon thousands of boys join Scouting. They find not only fun, but also a real chance to be something more. Every boy really wants to make good—to amount to something—to be of value in life. The ideals of our great Americans like Washington and Lincoln and Roosevelt and Wilson (and others) stir us all to ambition and the desire to be real men.



Of course every man of us faces three big problems:

1. Mastery of his own powers, getting them keen and ready for use.
2. Getting along with other people.
3. Finding a worthy use for these powers.

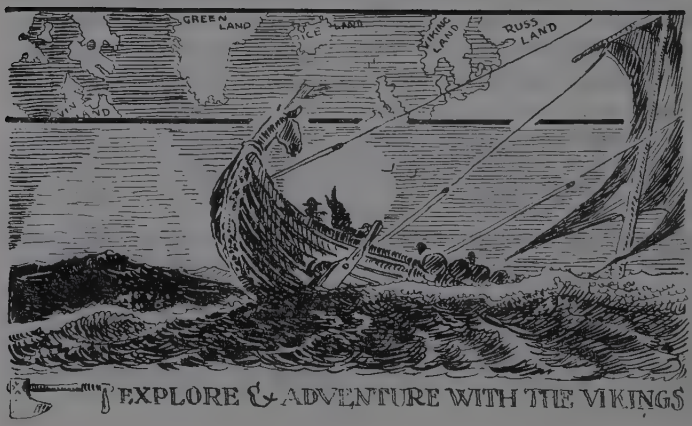
America looks to Scouting because it helps a boy with these problems—helps him find himself and his powers—helps him "Be Prepared."

Most people know that the nothing-to-do time, can make or break any fellow. Some boys have checked up on their own time and were surprised to find that they had six or eight hours of available time daily, awaiting wise use.

Scouting provides attractive things to do, in this spare time—things, too, that get one somewhere.

Scouting helps the Scout to value the great heritage which the past has brought to him in the American way of life, and Scouting points the way of good citizenship through service. Not "getting" but "giving"—not only "receiving" but "giving back" something that shall, as Lincoln phrased it—"make the world better because of our little life in it."

Our America is a melting pot. Our strength has come from every people who here sought liberty under law. In a world which blacks out individual freedom, our America must stand as a light house to freedom-loving men everywhere. Ours is a crusade to keep democracy strong, united—a land of Brotherhood and opportunity. The spirit of the Good Turn—caring about others, is the vital spirit of democracy and of civilization.



Scouts All Around The World

Prior to totalitarian invasions, Scouts were active in 73 civilized countries, which countries represent 91% of the world's population.

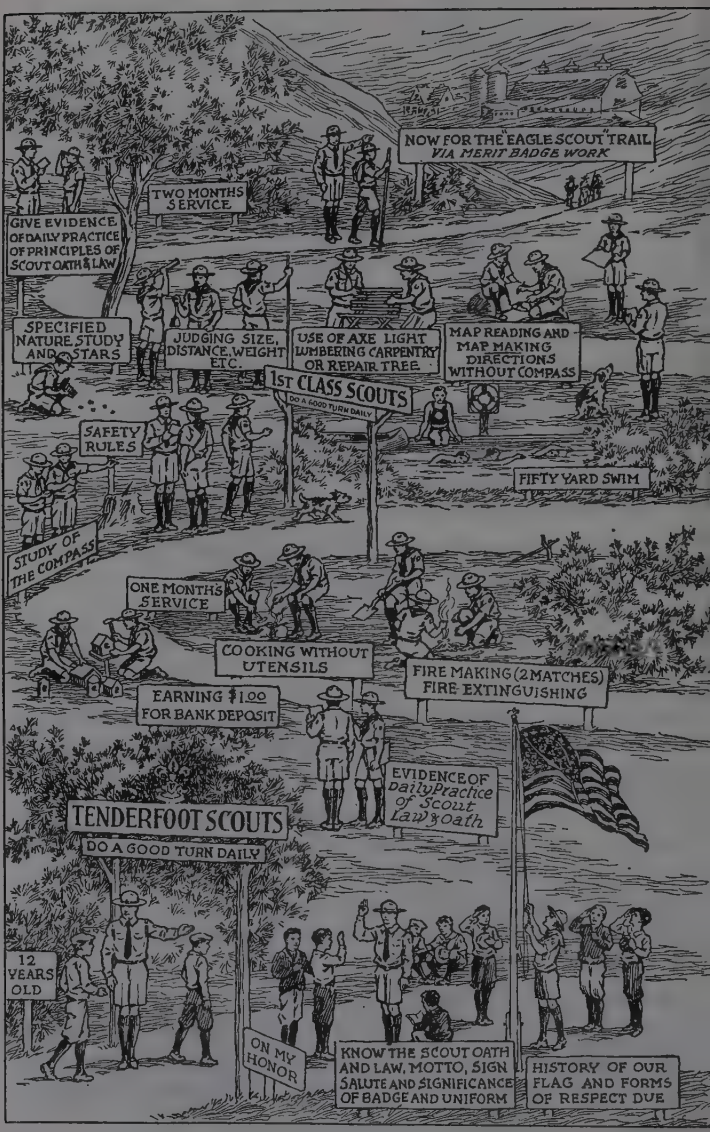
Scouting is a great friendly world brotherhood of boys and men, making for world peace.

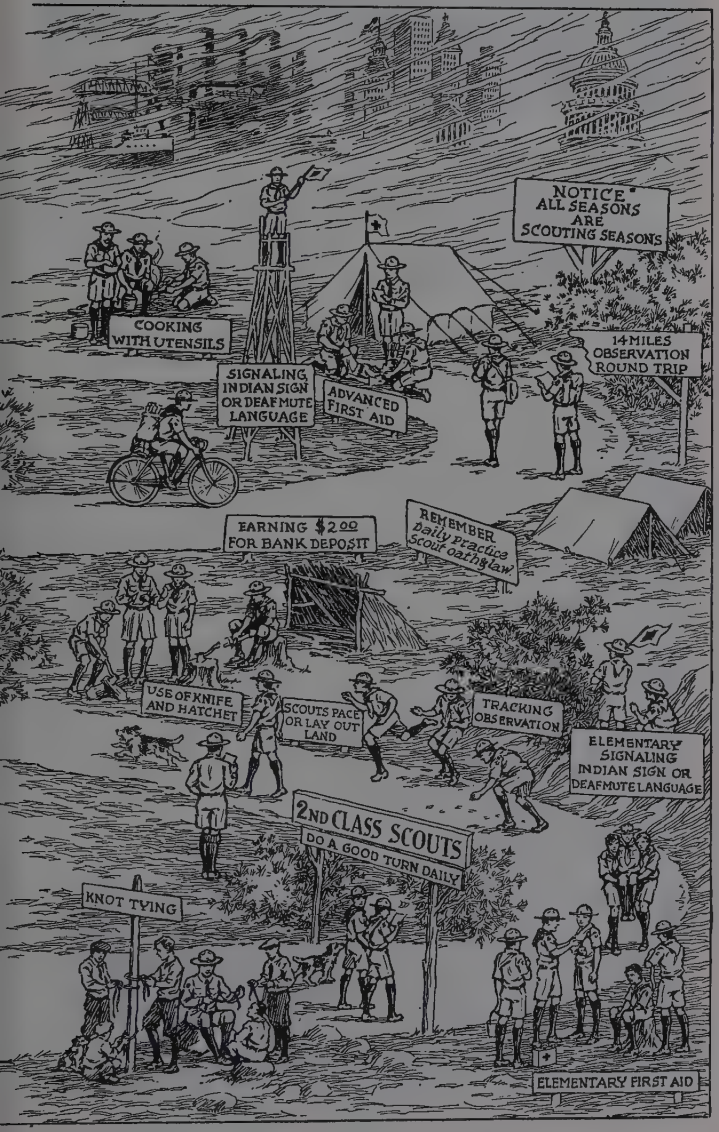
Now! How To Join

To become a Scout, a boy (he must be at least 12 years of age) should go to the nearest Scout or Scout Official of whom he knows. This Scouter will doubtless be able to help him find a Troop to join.

Where there is no near-by Troop one may be organized by a church, or school, or club, or lodge, or union, or grange, or similar institution. If a boy is practically alone, he may register as a "Lone Scout," writing directly to the nearest Scout Council or to the Boy Scouts of America, at 2 Park Avenue, New York, N. Y.

Every Scout in the country pays a registration fee of fifty cents a year to the National Council, which is responsible for carrying on and extending Scouting to other boys. Each Scout, therefore, helps bring Scouting to other boys.


NOW FOR THE "EAGLE SCOUT" TRAIL
VIA MERIT BADGE WORK
TWO MONTHS SERVICE
GIVE EVIDENCE OF DAILY PRACTICE OF PRINCIPLES OF SCOUT OATH & LAW
SPECIFIED NATURE, STUDY AND STARS
JUDGING SIZE, DISTANCE, WEIGHT ETC.
USE OF AXE LIGHT LUMBERING CARPENTRY OR REPAIR TREE
MAP READING AND MAP MAKING DIRECTIONS WITHOUT COMPASS
1ST CLASS SCOUTS
DO A GOOD TURN DAILY
SAFETY RULES
FIFTY YARD SWIM
STUDY OF THE COMPASS
ONE MONTHS SERVICE
COOKING WITHOUT UTENSILS
FIRE MAKING (2 MATCHES) FIRE EXTINGUISHING
EARNING $1.00 FOR BANK DEPOSIT
EVIDENCE OF Daily Practice of Scout Law & Oath
TENDERFOOT SCOUTS
DO A GOOD TURN DAILY
12 YEARS OLD
ON MY HONOR
KNOW THE SCOUT OATH AND LAW, MOTTO, SIGN SALUTE AND SIGNIFICANCE OF BADGE AND UNIFORM
HISTORY OF OUR FLAG AND FORMS OF RESPECT DUE


NOTICE
ALL SEASONS
ARE
SCOUTING SEASONS
COOKING
WITH UTENSILS
SIGNALING
INDIAN SIGN
OR DEAF MUTE
LANGUAGE
ADVANCED
FIRST AID
14 MILES
OBSERVATION
ROUND TRIP
EARNING $2.00
FOR BANK DEPOSIT
REMEMBER
Daily Practice
Scout oath & law
USE OF KNIFE
AND HATCHET
SCOUTS PACE
OR LAY OUT
LAND
TRACKING
OBSERVATION
ELEMENTARY
SIGNALING
INDIAN SIGN OR
DEAF MUTE LANGUAGE
2ND CLASS SCOUTS
DO A GOOD TURN DAILY
KNOT TYING
ELEMENTARY FIRST AID

CHAPTER III

THE GOOD TURN AND KNIGHTHOOD

Early in the fifth century, there rode through the forest, in what is now a corner of London, a powerful Knight, clad in full shining armor, with lance and plumes and helmet. Like his master, the great war horse was also protected by armored trappings. At his side rode his Squire, a young knight in training, and behind came his picked patrol of men-at-arms—strong, brave, armed to the teeth. A gallant band, alert and ready.

The shrill scream of a woman in trouble startled the band. Instantly the Knight turned aside and spurring his charger into full gallop, was soon at the woman's side. One stroke of his trusty sword disposed of her captor, while his men quickly overtook and handled the other bandits. Then the frightened woman was restored to her fireside —and the Knight traveled on.

Such was the spirit of these Knights of old. A Good Turn to some one was their daily practice.

* * *

1,500 years rolled by and over that selfsame one-time forest, the great city of London had grown.

All day long it had been in the hard grip of a dense, heavy fog. Traffic crept cautiously and slowly. Street lights had been ordered on by the police before noon, and now night was coming on. Danger lurked on every hand, because "going" was difficult even for the native.

William D. Boyce, Chicago publisher and traveler, was seeking a difficult address in old London. A boy approached him, and asked, "May I be of service to you?" Mr. Boyce told him where he wanted to go and the boy saluted and said, "Come with me, Sir," and forthwith led him to the desired spot. Like the typical American tourist, Mr. Boyce reached in his pocket and offered the boy a shilling. The boy promptly replied, "No, Sir, I am a Scout. Scouts do not accept tips for courtesies." The man in surprise murmured, "What do you say?" The Scout repeated and then added, "Don't you know about the Scouts?" Mr. Boyce said, "Tell me about them." The boy did and added, "Their office is very near, Sir. I'll be glad to show you the way."

Mr. Boyce had to complete his errand first. The lad waited, however, and then led him to the office of Lord Baden-Powell, founder of the British Boy Scout Asso-

ciation, where information about the Scout Movement was gladly given. Mr. Boyce was tremendously impressed and gathering all available information, brought it back to the United States.

On February 8 of the next year (1910), Mr. Boyce and others interested in boys and citizenship, formally incorporated the Boy Scouts of America. This day is observed each year as the birthday of Scouting in the United States.

This Good Turn to a stranger brought Scouting to the United States (1909), and to millions of American boys.

The "Unknown Scout's" Good Turn

On May 1, 1926, at Washington, D. C., the National Council of the Boy Scouts of America honored this Unknown English Scout with the award of the "Bronze Buffalo," a large statue of a buffalo similar to the Silver Buffalo Award, for distinguished service to boyhood. On it is this simple but eloquent inscription:

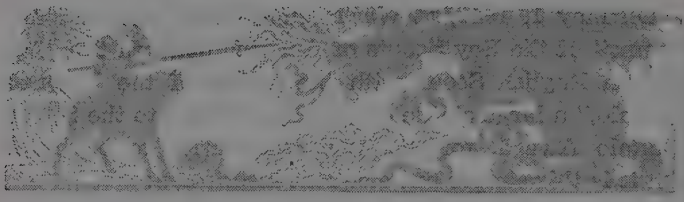
"To the Unknown Scout Whose Faithfulness in the Performance of the 'Daily Good Turn' Brought the Scout Movement to The United States of America."

The statue is set up in Gillwell Park, England, and was received by the Prince of Wales on behalf of the British Boy Scouts.

This Good Turn is in no way unlike millions of Good Turns done daily by the Boy Scouts in the United States and the world.

* * *

Any one of keen mind can quickly see that this Scout Good Turn carries on the Knightly ideal. It is the sacred heritage direct from the days of chivalry "When Knighthood was in Flower." Their motto was "Be Always Ready." A reading of their Knightly code, simple but majestic, reveals at once the kinship of ancient Knight and modern Scout.



The Knight's Code

"BE ALWAYS READY, with your armour on, except when you are taking your rest at night.

DEFEND the poor, and help them that cannot defend themselves.

DO NOTHING to hurt or offend any one else.

BE PREPARED to fight in the defense of your country.

AT WHATEVER you are working, try and win honor and a name for honesty.

NEVER break your promise.

MAINTAIN the HONOR of your country with your life. Rather die honest than live shamelessly.

CHIVALRY REQUIRETH that youth should be trained to perform the most laborious and humble offices with cheerfulness and grace; and TO DO GOOD UNTO OTHERS."

—From Scouting for Boys—Baden Powell

'Twas men of such timber and vows that King Arthur gathered about his famed Round Table and history and song are full of their deeds; not alone for their valor as fighters, but more for their honor as men, their chivalry to women and their championing of right and of the weak. Such, then is the history of the beginnings of the Scout Good Turn.

Human Rights And Knights

In these early days, when poor people were wronged, the Knights were almost the only help. This protection to tradesmen and farmers made possible the beginnings of villages and towns just outside of castle walls.

'Twas these same Knights (The Barons) who in 1215 made King John of England sign the Magna Carta—the first great milestone to Freedom.

This document fixed in writing a recognition of the rights of common people, so that kings could no longer override them at will.

THE NINE POINTS OF THE MAGNA CARTA

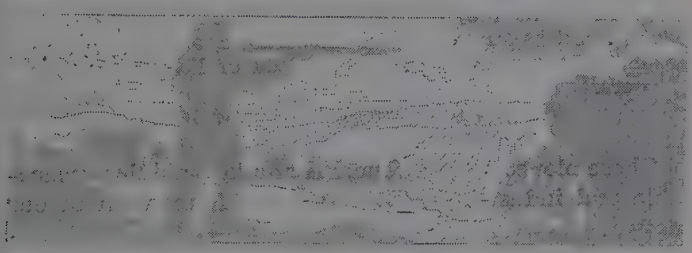
1. "NO MAN SHALL BE TAKEN OR IMPRISONED."
2. "NO MAN SHALL BE DISSEIZED OR DISPOSSESSED."
3. "NO MAN SHALL BE OUTLAWED" from the privileges of the law.
4. "NO MAN SHALL BE BANISHED."
5. "NO MAN SHALL IN ANY SORT BE DESTROYED."
6. "NO MAN SHALL BE CONDEMNED BUT BY THE JUDGMENT OF HIS PEERS." (Our trial by jury.)
7. "We shall SELL to no man justice or right."
8. "We shall DENY to no man justice or right."
9. "We shall DEFER to no man justice or right."

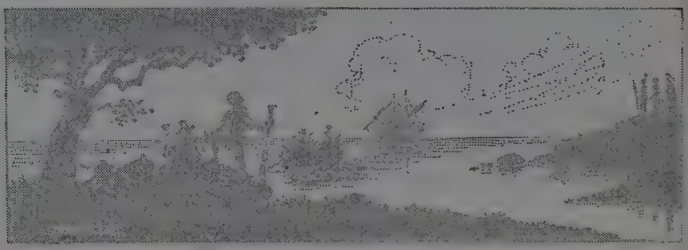
—From Wm. Penn's publication of 1687

In other words, government began to guarantee some human rights.

The Pioneer Knights

The spirit of liberty grew more and more—religious oppression making it stronger until little bands began to brave uncharted seas and move to new America.





They brought with them knightly ideals. In the old Mayflower was signed the first compact in which men voluntarily agreed as to how they should be governed.

MAYFLOWER COMPACT

"In ye name of God, Amen, WE, whose names are underwritten, the loyall subjects of our dread soveraigne Lord, King James, by ye grace of God, of Great Britaine, France & Ireland, King, defender of ye faith, etc., having undertaken for ye glorie of God, and advancemente of ye Christian faith, and honour of our King and countrie, a voyage to plant ye first colonie in ye northerne parts of Virginia, doe by these presents, solemnly and mutually in the presence of God and of one another, covenant and combine ourselves together into a civile body politick for our better ordering and preservation and furtherance of ye ends aforesaid; and by virtue hereof to enacte, constitute, and frame such just and equal lawes, ordinances, acts, constitution and offices, from time to time, as shall be thought most meate and convenient for ye general good of ye colonie, unto which we promise all due submission and obedience."

"And after they had provided a place for their goods . . . and begunne some small cottages, as time would admitte, they mette and consulted of lawes and orders."

—Bradford—History of the Plymouth Plantation

These pioneers were religious and law-abiding, peaceable and industrious. They laid the foundation of our nation.

It was such men who penned the immortal Declaration of Independence, as a Good Turn to the world:

Declaration Of Independence

> "We hold these truths to be self evident: that all men are created equal; that they are endowed by their Creator with certain inalienable rights; that among these are life, liberty, and the pursuit of happiness."

This great document then recited the acts which prompted it and closed with these ringing words:

> "And for the support of this declaration with a firm reliance on the protection of Divine Providence, we mutually pledge to each other OUR LIVES, OUR FORTUNES, AND OUR SACRED HONOR."

These sturdy souls were pioneer Knights, defending the weak and oppressed, and establishing the American right to worship God according to conscience. Women and children were protected from wild animals and enemies and outlaws. The buckskin pioneers who pushed westward to conquer a continent, to harness its great resources, and to make available to us its beauties—they were Knights indeed. They were men of strong, stalwart, athletic build—clean, open countenance, high moral character and usually of strong religious convictions. They hated dishonesty, were generally kindly and generous and brave, polite to women and to old people, ready to rescue a companion in danger and equally ready to risk their lives for a stranger.

They also knew the things that Scouts everywhere need to know to take care of themselves and others. They knew the woods, and fields and marshes; knew

where the best fish might be caught; knew the haunts and tracks of animals; knew the trees and the trail signs; knew how to find their way by the stars; and knew how to be comfortable in the heart of the great forests.

Respect To Womanhood

The girl who, fifteen centuries ago, ran into King Arthur's hall crying for help is little different in situation from a little girl fleeing from some ill bred bully as she goes home from school in America. The Knight donned his armor and galloped to the robbers' cave and fought them to defeat single-handed. The Knight of today can still protect the weak and the needy every day.

Good manners are as vital in business as they are in social life. In meeting a woman, or a child, a man should as a matter of course always make way for her.

When walking with a lady or a child, a Scout should always walk on the side nearest traffic, so as to protect.

When riding in a crowded street car or bus, men worthy of the name will offer their seats to woman or child. As a Scout, set the example with a smile.

In times of accident and danger, the strong men stand back to give the women and children protection; such on ships, too, is the chivalry of the sea. Courtesy to women should be shown at all times. If you are seated and a lady enters the room, stand up and see if you can help her in any way before you sit down.

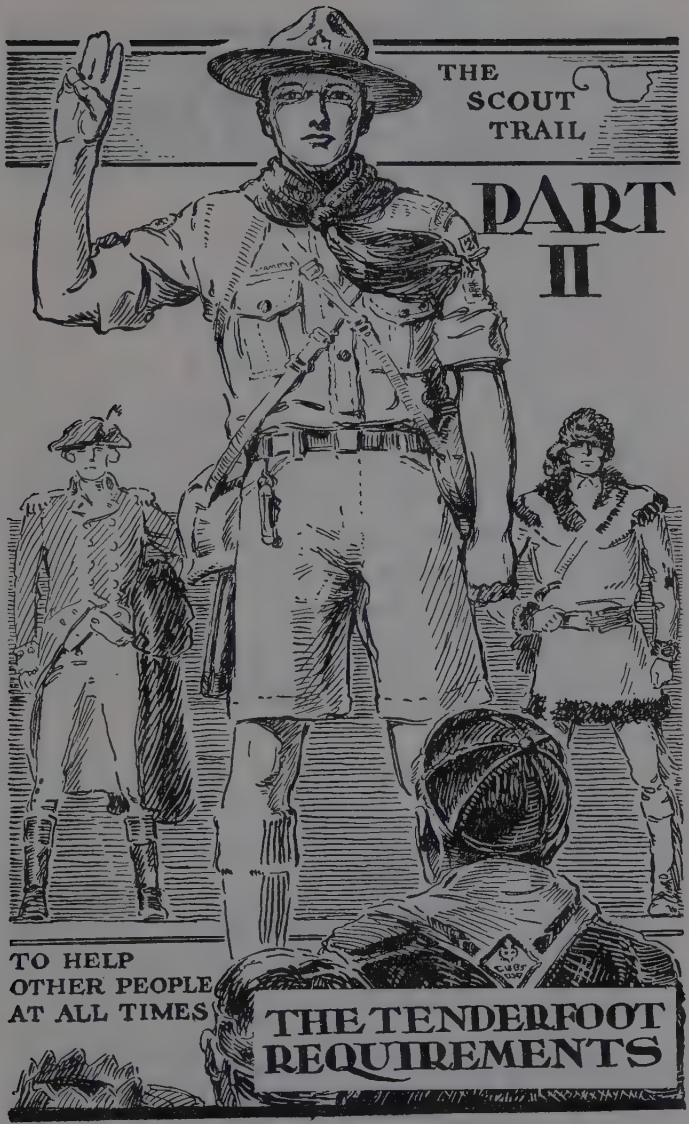
The Real Test—The final test of a good Scout is in his doing of Daily Good Turns, quietly and without boasting. All the uniforms ever made, decorated with all the badges, do not make the wearer a Scout.

A Good Turn is an extra kindness and service—something more than what courtesy and good manners would do. To answer a traveler's inquiry is not a Good Turn, it is natural courtesy, but to actually go to conduct him, that would be extending to him more courtesy than he had asked.

The real secret of doing Good Turns is in an attitude of mind. The Scout who cares about other people's comfort, happiness, welfare finds hundreds of chances to get a thrill out of being helpful to others. Soon this tends to become a habit and marks the Scout as a real citizen.

Some Individual Good Turns

Let a dog out of a trap.
Distributed notices for city.
Wheeled a crippled man.
Cooked for a sick person.
Gave water to crippled dog.
Fixed a little boy's tricycle.
Helped boy look for his dog.
Stopped fight in school yard.
Helped put out a burning field.
Moved sewer pipe out of road.
Helped cook "pick" chicken.
Collected toys for poor family at Christmas.
Did an errand for a lady.
Helped grocer recover spilled fruit.
Got boy's ball out of tree.
Wrapped bundles for Red Cross.
Dug post holes for neighbor.
Distributed flowers to hospital.
Watered chickens at store.
First aid to a burned child.
Helped a paralyzed man fix his papers.
Helped get a horse up that had fallen.
Carried a crippled boy's book for him.
Took a small child across three streets.
Found and restored lady's pocketbook.
Picked up nails and glass out of street.
Cut wood for another boy who was sick.
Restored a lost child to its mother.
Boy was sick, pulled him home on wheel.
Helped a lady with bundles cross street.
Polished an old woman's stove for her.
Splinted and bandaged broken leg of dog.
Found bird with broken leg; cared for it.
Took chewing gum off the street-car seat.
Freed a cow that was tangled in a wire fence.
Went to town on errand for sick woman.
Helped crippled boy across the street.
Carried a letter across the street for an old man.
Helped a man with auto trouble.
Made scrapbooks for the Home for the Friendless.
Assisted a foreign boy with some English grammar.
Climbed a tree at night to get a chicken for a lady.
Pulled a splinter out of a dog's foot and treated it.
Assisted aged lady across the street during rush hour.
Put top back on manhole after same was open part of the night.
Called power company and reported to them a live wire.
Stopped some boys from hitting a little dog with stones.
Removed overturned garbage can from dark street.
Helped a blind man off the street car and across the street.


THE
SCOUT
TRAIL
PART
II
TO HELP
OTHER PEOPLE
AT ALL TIMES
THE TENDERFOOT
REQUIREMENTS

To become a Scout a boy must be at least twelve years of age. Upon demonstrating to the satisfaction of the Scoutmaster his ability to repeat the Scout Oath and Law in full and his thorough knowledge of their meaning, and upon meeting the following requirements, the boy formally subscribes to the Oath and Law and is registered as a Tenderfoot Scout, and is then entitled to wear the Tenderfoot Badge and the Official Uniform of the Boy Scouts of America.

1—Know the Scout Oath and Law, Motto, Sign, Salute, and significance of the Badge and Uniform.

2—Know the composition and history of The Flag of the United States of America and the customary forms of respect due to it.

3—Tie the Square Knot and any eight of the following knots: Sheet Bend, Bowline, Fisherman's, Sheepshank, Slip, Clove Hitch, Timber Hitch, Two Half Hitches, Carrick Bend, Miller's Knot, Rope Halters, Pipe Hitch, Stevedore, Barrel Hitch, Girth Hitch, Binder Twine Bend, Lariat Loop, Hitching Tie.

**BE PREPARED
TO HELP OTHER PEOPLE
AT ALL TIMES**

CHAPTER IV

HOW TO BECOME A TENDERFOOT SCOUT

"To become a Scout a boy must be at least twelve years of age."

But no boy can be a Scout just because he happens to be old enough. There are also Things he must KNOW and BE.

Most important among these are The Scout Oath and The Scout Law. First a Scout knows them, then the Scout does them—that's the way people know he's a Scout—by what he does!

Requirement No. 1 (a)

"Upon demonstrating to the satisfaction of the Scoutmaster his ability to repeat the Scout Oath and Law in full and his thorough knowledge of their meaning, and upon meeting the following requirements, the boy formally subscribes to the Oath and Law and is registered as a Tenderfoot Scout, and is then entitled to wear the Tenderfoot Badge and the Official Uniform of the Boy Scouts of America."

THE SCOUT OATH

On my honor I will do my best—
To do my duty to God and my country, and to obey the Scout Law.
To help other people at all times.
To keep myself physically strong, mentally awake, and morally straight.

Out of the past of the race has come only one oath which ranks with this Scout Oath of the young American citizen. That was the oath the young Athenian citizen took when he became 17 years of age.

Oath Of The Athenian Young Man

"We will never bring disgrace on this, our city, by an act of dishonesty or cowardice.

"We will fight for the ideals and Sacred Things of the city both alone and with many.

"We will revere and obey the City's laws, and will do our best to incite a like reverence and respect in those above us who are prone to annul them or set them at naught. We will strive increasingly to quicken the public's sense of civic duty.

"Thus in all these ways we will transmit this city, not only not less, but greater, better and more beautiful than it was transmitted to us."

Personal Letters From Two Great Scouters

My dear Fellow Scout:

As a Tenderfoot you are now to be loaned the use of the Scout name and Uniform and Badge. That makes you the representative of Scouting—it will be judged by what you do.

Guard its good name as you would your own honor.

Faithfully,

Dan Beard

National Scout Commissioner

My Dear Scout:

As a registered Scout you are now on Uncle Sam's Team and a member of the world's largest—"Boys' Gang"—over three million throughout the world. Your Certificate of Membership gives you many privileges—Patrol, Troop, community activities, the right to wear the Official Uniform and Badges—the joy and thrills of the Scout camp and hikes.

It also involves definite responsibilities—loyalty to your Patrol—Troop—Scoutmaster, and fidelity to our Scout Oath —and Law—our Motto, Be Prepared, and our Daily Good Turn.

As a Scout you have the opportunity to advance yourself and receive recognition in accordance with your own effort and determination. Hit the line hard. Play the game according to the rules. Remember "Once a Scout, Always a Scout." Do not depend upon your Uniform and Badge or Membership Certificate as the only means by which your associates may know you are a Scout. Much joy and happiness to you.

Cordially,

James E. West

Chief Scout Executive,
Editor of Boys' Life

Codes Of Honor

The strong men of every age and every race have always had their codes of honor. In ancient Japan, among the sun-worshipping Incas of Peru, the Knights of the Middle Ages, the Crusaders, the American Indians, the hardy frontiersmen of early America—all these had their codes of honor. Even so, the newer civilization of America, touched by the laws of Moses and the teachings of Christ, has built the code of Washington and Lincoln and Roosevelt and Wilson—the code of strong, clean American Citizenship—the law of the Scout.

Requirement No. 1 (b)

"Know the Scout Law"

"The boy formally subscribes to the Oath and Law."

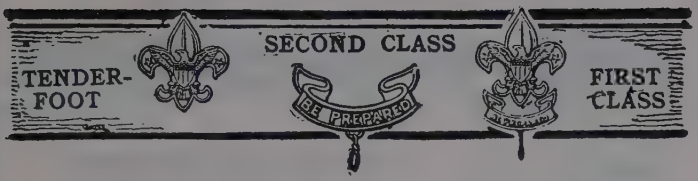
The Scout Law

Just as every Knight pledged his loyalty and life to his King, so every lad seeking admission to the great world brotherhood of Scouting, takes the Scout Oath and Law, as his own code of action.

Every Scout knows this Law (with its 12 points).

Every real Scout lives it.

In learning the Scout Law, the Scout should know not only the title "A Scout is Trustworthy," but the entire text given under such title and be able to explain the meaning in his own words.

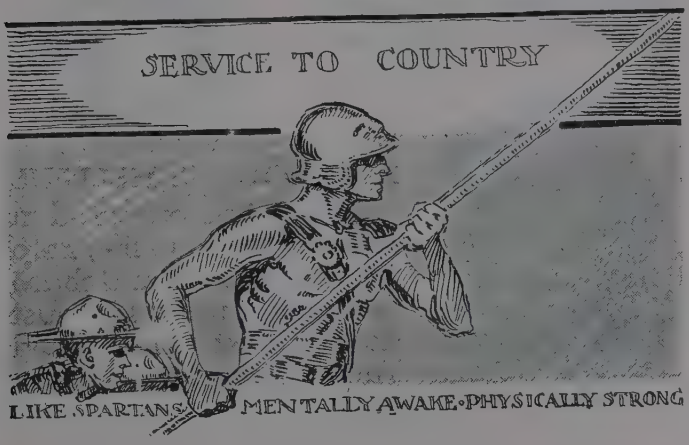


Playing The Game

Practically the entire life of every Scout will be lived with other people. Everywhere he goes, he will meet people and have to deal with them. In a very large measure, his own success in life will hinge upon his ability to get along with people. If he goes into business, he will simply be doing things for people—honest business is just that.

How does the Scout Law figure in all this? Strange to say, most people he meets will tend to mirror back the spirit and attitude the Scout sends out to them.

The Scout Law is of especial importance as it outlines how one should live and act to get along successfully with people—to merit their respect and confidence by applying the age-old Golden Rule—treating them as one would like to be treated.



1. A SCOUT IS TRUSTWORTHY

A Scout's honor is to be trusted. If he were to violate his honor by telling a lie, or by cheating, or by not doing exactly a given task, when trusted on his honor, he may be directed to hand over his Scout Badge.

2. A SCOUT IS LOYAL

He is loyal to all to whom loyalty is due, his Scout leader, his home, and parents and country.

3. A SCOUT IS HELPFUL

He must be prepared at any time to save life, help injured persons, and share the home duties. He must do at least one "Good Turn" to somebody every day.

4. A SCOUT IS FRIENDLY

He is a friend to all and a brother to every other Scout.

5. A SCOUT IS COURTEOUS

He is polite to all, especially to women, children, old people and the weak and helpless. He must not take pay for being helpful or courteous.

6. A SCOUT IS KIND

He is a friend to animals. He will not kill nor hurt any living creature needlessly, but will strive to save and protect all harmless life.

7. A SCOUT IS OBEDIENT

He obeys his parents, Scoutmaster, Patrol Leader, and all other duly constituted authorities.

8. A SCOUT IS CHEERFUL

He smiles whenever he can. His obedience to orders is prompt and cheery. He never shirks nor grumbles at hardships.

9. A SCOUT IS THRIFTY

He does not wantonly destroy property. He works faithfully, wastes nothing, and makes the best use of his opportunities. He saves his money so that he may pay his own way, be generous to those in need, and helpful to worthy objects. He may work for pay, but must not receive tips for courtesies or Good Turns.

10. A SCOUT IS BRAVE

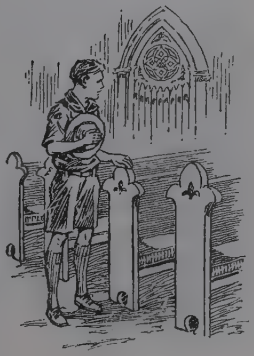
He has the courage to face danger in spite of fear, and to stand up for the right against the coaxings of friends or the jeers or threats of enemies, and defeat does not down him.

11. A SCOUT IS CLEAN

He keeps clean in body and thought, stands for clean speech, clean sport, clean habits, and travels with a clean crowd.

12. A SCOUT IS REVERENT

He is reverent toward God. He is faithful in his religious duties, and respects the convictions of others in matters of custom and religion.



Requirement No. 1 (c)
"Know the Scout Motto"

"Be Prepared" is the Scout Motto. "Be Always Ready" was the knight's motto..

A burning building, a life in danger—a Scout is prepared by knowing in advance what to do; a child falls into the water and a Scout is prepared to save it; someone breaks an arm, a Scout is prepared to give first aid, and call a doctor; a Scout is a citizen who keeps himself strong, controls himself and learns how to meet emergencies.

A Scout learns also to Be Prepared to be useful in the ordinary affairs of life—obedience, respect for law, respect for others are part of his thoughts as well as planning out in advance what to do in a crisis.

His also is the job of preparing himself to be the useful citizen America and Democracy need.

Requirement No. 1 (d)
"Know the Scout Sign"

How to Give It. It is made, palm forward, fingers as in the sketch, with the right forearm at right angles to the shoulder line. This (The Scout Sign) throws the right hand slightly above the eyes, but in an easy position to snap into salute.

Its Use. Its chief use is when giving the Scout Oath, or Scout Law though abroad it is used as a recognition sign.

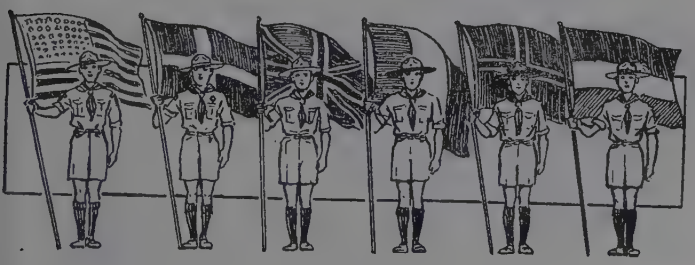
Scouts anywhere in the world recognize this sign. An English Scout made it over the side of a ship docking at the Cape of Good Hope and instantly a big fellow on the wharf froze into the Scout Salute—he, too, was a Scout.

Its Meaning. The three fingers pointing upward indicate the three promises of the Scout Oath, the same as the meaning of the three-part-top of the Scout Badge. They also indicate that the Scout is climbing upward.

The Scout Left Hand Clasp

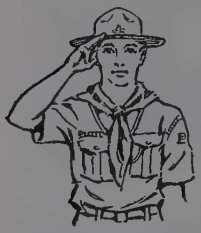
By agreement of the Scout Leaders throughout the world, Boy Scouts greet Brother Scouts with a warm left hand clasp. This means of greeting is also used in connection with all Scout gatherings. It is intended to have this different method serve to remind Scouts that they belong to a world-wide brotherhood and that everywhere throughout the world Scouts are following this method of extending greetings as evidence of their interest in Scouts in all parts of the world.

In America, Scouts also extend the left hand but with the little finger separated from the others and interlocked with the little finger of the person with whom shaking hands, thus cordially symbolizing the Scout Badge.



Requirement No. 1 (e)

"Know the Scout Salute"



How to Give it. The Scout Salute is given with the right hand when the hat is either on or off. The salute is the same except in one case the fingers (held as in Scout Sign) touch the brim of the hat—in the other case, they touch the forehead just above the right eye.

Its Use. The salute is used:

1. To salute The Flag of the United States.
2. When greeting other Scouts.
3. When greeting, or meeting, or leaving Scout Officials.

Its Meaning. Wherever used, its meaning is respect.

Respect To Scout Officials

As Lord Baden-Powell — Chief Scout of the World—remarked on a visit to America —"There is a right way to greet Scout Officials. Every Scout in America should know it and use it." It is a part of good breeding and good manners.

1. The Scout Salute is used in greeting other Scouts and as a sign of respect to Scout Officials, whether in uniform or not.

2. Whenever a Scout Official enters or leaves a meeting—and is recognized by the one in charge of the meeting—rise and salute him, whether he is in uniform or not.

Help make American Scouts as observant of good custom as any in the world.

Requirement No. 1 (f)
"Know the significance of the Badge"

Recognition. When a Scout puts on his Badge, he joins a great band of millions of men and boys who are Scouts and who will recognize him as one. As Commissioner Beard has reminded us (page 31), what a Scout does, the way he acts, also proclaims him a Scout.

Protection. The official badges of the Boy Scouts of America are issued by the National Council, under Authority of Congress, only to those who are members —no one else may wear them. They are protected (as the uniform is) by the U. S. Patent Laws—Letters Patent 41512 and 41532—and any one infringing upon them is open to prosecution.*

History Of The Badge

While the Scout Badge resembles the French "Fleur-de-lis," it is really the sign of the North taken from the mariner's compass. The compass is a vital tool of navigation. The Chinese claim its use as early as 2634 B.C.

It was actually used by them at sea as early as 300 A.D. Marco Polo brought the compass to Europe on his return from Cathay at the close of the 13th century.

*The Boy Scouts of America reserve the right to recall for cause, at any time, any badge awarded.

In the centuries of adventure when men of courage sailed strange seas and made trails across unsettled continents, the north was their one and only fixed point and this three-pointed sign came to stand for the north with the explorers, pioneers, and trappers, woodsmen and Scouts. It became their emblem, only slightly changed as centuries passed by.

What Does The Badge Mean?—With slight changes in different countries, the Scout trefoil badge is used around the world as a mark of the Scout Brotherhood of good citizenship and friendliness.

The three points (1) like the three fingers of the sign, refer to the three points of the Scout Oath.

The two stars (2) symbolize the ideals of truth and knowledge which are foundations of strong Scout citizenship.

These stars guide the Scout by night as they do the mariners on the seven seas and they symbolize the great open, wondrous out-of-doors, which the Scout enjoys in his hikes and camps, in his camp fires, and his sleeping beneath the boundless open sky.

The eagle is the national emblem of the United States of America. It symbolizes freedom and readiness to defend that hard-won freedom.

The scroll, at the bottom of the Badge (which is used as the Badge of the Second Class Scout) is turned up at its ends (3) like a Scout's mouth, because a Scout smiles as he willingly does his duty or enjoys his play.

The knot (4) at the bottom of the Badge—a simple overhand knot—is a reminder that a Scout does a Good Turn to some one daily.

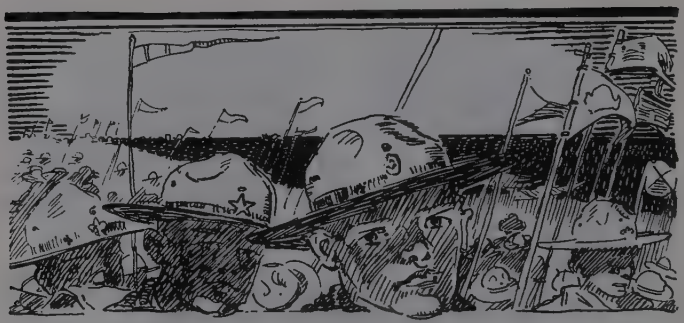
Requirement No. 1 (g)

"Know the significance of the Uniform"

What The Uniform Means

First of all, it is a token that the Scout *belongs,* that he is now a part of the biggest boys' organization of its kind that the world has ever seen, that over three million boys throughout almost all countries consider him their friend and brother. Wherever a Scout travels, whether in his own or in foreign lands, his Uniform is an introduction to worth-while people, for Scouts are both widely and favorably known.

The Scout Uniform symbolizes the boy's obligation to measure up to a high standard of *character.* It stands for character because it is restricted to those who are active Scouts in good standing, this restriction being by act of the Federal Congress of the United States. Scouts are fellows who follow certain well-known high ideals of personal trustworthiness and Good Turn service. When a stranger in your community sees a Scout in Uniform, he thinks at once, "There is a chap who will tell me what I want to know"—and he knows too, that a Scout will expect no pay for a courtesy.



The Scout Uniform stands for *service*. It means that you are ready, "prepared" to help others. An accident occurs, a crowd gathers around. No one knows just what to do. A uniformed Scout steps quietly forward. The crowd lets him through, for he's supposed to know what to do in an emergency. He administers first aid and slips away, probably without his name being known. Scouts have saved lives in this fine modest fashion. The Scout Uniform quietly says that here is a fellow who is ready to be "helpful to other people at all times"; he is "prepared."

The Uniform signifies *democracy*. Each Scout wears the same Uniform, and meets brother Scouts on the same level. It is no mark of one who considers himself better than others, but it is the mark of one striving toward useful citizenship. In Scouting all creeds, races and classes are as one. Each fellow stands upon his own feet—high and low, rich and poor—each is frank in terms of what he *is* and *does*.

It stands for *outdoor life*. The color and design of the hat, the shirt, the shorts, the stockings, the shoes make the Uniform the clothing of the outdoorsman. The khaki color blends with the hues of the forest, making the Scout almost invisible when he tracks the animals or studies the birds. The design is made for comfort, for

great freedom of action, and for health. From its picturesque sun-and-storm proof hat to its broad-soled, low-heeled, comfortable shoes, the Uniform, free at the knees, close at the waist, loose over the shoulders, open at the neck, is the visible embodiment of character and spirit of a Scout—nothing to conceal, nothing to fear—everything for service to others.

In the same way many parts of the Uniform have their individual meaning.

Dr. West's Comment

Speaking of the meaning and responsibility of wearing the Scout Uniform, Dr. James E. West says:

> "The Scout Uniform is one of the most significant and important features of the Boy Scout Movement. The Scout Uniform is a part of the romance of Scouting. It is a symbol of the ideals and outdoor activities for which the Movement stands. It has the picturesque touch which helps the Scout identify himself with the great traditions of our outdoorsmen—the pioneer, the explorer, scout and cowboy—which underlie the game of Scouting. Here in America, as throughout the world, the Scout Uniform has earned the respect of the general public. As never before the public has come to look upon the Scout as the possessor of those qualities of character and training that make him not merely capable of taking his part in high adventures, but a public-spirited citizen always playing his part in the life of the community in every day life as well as in the stress of emergency.
>
> "Too often the Scout is known only by his Uniform. To millions the khaki Uniform, with the Scout Neckerchief and Scout Hat, are the badge of boy accomplishment and boy ambition. In his Uniform they see not only the boy whose type can make up the membership of daring enterprises, but a representative of the entire Boy Scouts of America and the things in character and citizenship for which it stands. To the real Scout his Uniform is a trust."

The Broad-Brimmed Hat

The broad-brimmed felt hat represents the experience of ages in a search for the most useful headgear for the out-of-doors.

When in the old days an Indian went hunting he would stop every now and then to shade his eyes from the sun by holding his hand to his forehead. The white men of the plains, the pioneers, the forty-niners, the cowboys needed to shade their eyes, too, but they knew that if they used one hand in this way they would have one hand less with which to hold the gun or the axe or the shovel, or to swing the lasso. So they got a hat with a brim wide enough to do the job of protecting their eyes from sun glare in their effort to "Be Prepared." But at the same time the hat helped them in other ways. If they pulled the hat forward, they could plow through the brush with their heads fully protected. It kept the back of their necks dry while they knelt to kindle the cooking fire in the rain; it protected their faces from sunburn.

Now you see our broad-brimmed hat all over the world, worn by mounted police through the snows of northern Canada, by explorers through the wilds of tropical Africa, by the Scouts of nearly every land.

And to the Scouts especially it has become a strong tradition, a symbol of the game of Scouting. In other countries you may find Scouts wearing different colors and designs of Uniform, but their broad-brimmed hat is almost universally the same as ours. From a distance a khaki shirt may tell you little of its wearer, but there is no way of mistaking a boy who wears the broad-brimmed hat. He *must* be a Scout.

The Neckerchief

The neckerchief is characteristic of the Scouts the world over.

The pioneers or cowboys wore bright-colored scarfs around their necks for protection against the rays of the sun and against the sand storm. The neckerchief protects a Scout in a similar manner, and its color shows to what group within the great brotherhood he belongs. In order always to have it easily available the Scout fastens it around his neck with a slide, and ties the ends with one end around the other, in an overhand knot. Since a Good Turn is often accomplished through the use of the neckerchief, necessitating the untying of this knot, the knot has become known as the "Good Turn Knot." It is a constant reminder to the Scout of his daily deed of kindness.

The Scout Neckerchief

How To Tie The Neckerchief—First, fold the neckerchief diagonally to form a triangle. Turn the long edge over about three inches evenly, once, twice, or even three times, to the size of the boy, to insure the neckerchief's lying smoothly at the back and hanging correctly in front. Place around the neck over the collar of the shirt, insert the slide up over the ends to the point where the knot would be tied as a four-in-hand necktie. Then tie one of the two loose ends around the other in an overhand knot. This lower knot is a constant reminder of the Daily Good Turn. The advantages of the slide are that in hot weather and on the hike the neckerchief can be loosened around the throat.

Uses for the Scout Neckerchief

SCOUTING

1. Signal Flag on Stick (Morse) (1)*
2. Signal Flag Semaphore (2)
3. Life Line (Troop)
4. Rope Ladder (Troop)
5. Bag, Hobo Style (1)
6. Lashing for bundles
7. Caulking for boat
8. Sail for boat (4)
9. Covering for food
10. Belt, emergency (1)
11. Knot tying practice
12. Substitutes for clothing (4)
13. Trunks for bathing (1)
14. Apron for kitchen police
15. Troop identification
16. Good Turn Reminder (1)
17. Guard Rope (Troop)
18. Emergency sock (1)
19. Distress Signal (1)
20. Smoke Signals (1)
21. Flare (1)
22. Torn strips, trail marker
23. Bathing cap to denote classes of swimmers—Red, beginners; blue, fair swimmers; white, Life Savers

TRIANGULAR BANDAGE USES

1. Pressure of armpit Artery
2. Arm Sling (10)
3. Collar Bone Fracture (3)
4. Ankle Sprain Dressing (1)
5. Fractured Hip (7 to 9)
6. Kerchief Stretcher (5)
7. Padding for splints (several)
8. Chest Carry (1)
9. Tump Line Carry (1) Pack strap
10. Hand Bandages (1)
11. Head Bandages (1)
12. Foot Bandages (1)
13. Support for Sprained wrist
14. Tourniquet uses (1)
15. Trench Bandage (1)
16. Compress (1)
17. Smoke masks
18. Fireman's drag—free wrists
19. Tied hands carry (1)
20. Tied hands across overturned canoe
21. Tying good ankle as splint to broken one (4)
22. Guide rope to find way out of smoky room (Troop)
23. Sun shelter for injured (1)

GENERAL

1. Rope for tying animals
2. Mosquito covering for head
3. Sweat band for games
4. Team identification (games)
5. Tie for three-legged race
6. Swatters for running the gauntlet
7. Red kerchief on projecting poles in transit
8. Padding for carrying load on head
9. Repairing Harness
10. Substitute for hat or cap

(*Number of neckerchiefs needed)

The Official Uniform

The official Uniform of the Boy Scouts is made up of standard khaki material. This sturdy material was selected with the greatest care. It was submitted to severe tests and chosen because of its wearing qualities.

The Boy Scout Uniform is specifically authorized by an act of Congress approved June 3, 1916, and is protected by the provisions of the Federal Charter, June 15, 1916.

It consists of the hat, shirt, shorts or breeches, belt and stockings, all khaki colored. The official shoes are tan in color. The neckerchief is of some color determined by the Troop or Local Council.

Wearing The Uniform Correctly—Those who wear the Uniform must remember that there is *only one correct way* of wearing it. See the chart in color section.

There is only *one* (1) way of tying the neckerchief, one (1) way of wearing the Patrol medallion and Troop

Numeral, one (1) color of stockings, and one (1) way of sewing on badges and insignia, and so forth.

Complying carefully with the rules given in the following pages will keep one from going wrong.

When To Wear The Uniform—The Official Uniform of the Boy Scouts of America should be worn by Scouts with such Insignia as are specifically designated.

1. In all formal Scouting activities such as and specifically Patrol, Troop, Tribe or Ship meetings, hikes, camps, rallies, demonstrations, etc. At special Church services for Scouts.

2. When appearing for advancement in Scout Rank before formal Courts of Honor or in the presentation of awards.

3. During Boy Scout Week in February.

4. When prescribed for special Scouting service or civic service activities.

5. On such other occasions as may be specifically recommended or prescribed by either the Local or National Council.

The Uniform Should Not Be Worn—1. When soliciting funds or engaged in any selling campaign, or in any commercial operation. This shall be not construed to forbid Scouts in Uniform selling at Scout Circuses, Rallies and similar Scout events.

2. When engaged in any distinctive political endeavor.

3. When appearing upon the stage professionally without specific authority from the Executive Board of the National Council.

4. When taking part in parades except for the purpose of rendering services as a Scout or Scouter or, when representing officially the Boy Scouts of America.

5. When one has ceased to be a Scout or Scouter through failure to reregister or has left the Scout Movement for any other reason.

Care Of The Uniform

1. Scouts should be careful of their clothing at all times. Remember that every article of clothing represents a certain amount of money and "A Scout is Thrifty." Never leave clothing lying about carelessly even for a moment. It should be carefully folded and put away or hung by hangers so as to keep its shape.

2. Everyone receives greater satisfaction when wearing his uniform, as well as gets much more wear out of it, by keeping it clean and repaired. Spots should always be removed as soon as possible. Turpentine will take out paint. Grease spots can be removed by placing a piece of brown paper, newspaper, or other absorbent paper over the stain, and pressing with a hot iron. Clothes bags and knapsacks after being scrubbed perfectly clean should be well rinsed in order to wash out all soap.

3. Shoes and leather straps should be dried slowly, brushed clean and wiped with neatsfoot oil or tallow. They may be sponged with a lather of castile soap and warm water. In no case should leather be dipped into water. Quick drying spoils leather. Leather requires oil, to preserve its pliability. If oil is not supplied it will become brittle, crack and break easily under strain. In polishing shoes, using an oil paste tends to keep them pliable.

Instructions For Washing—1. The material used in the Official Uniform of the Boy Scouts of America has been

selected after most careful testing. It is guaranteed against fading and shrinking when properly handled in washing, by the manufacturers as well as by National Council. All guaranteed garments have the Official Seal of the Boy Scouts of America, and cases of unsatisfactory service should be reported, and a written statement of process followed in washing.

The cloth should be washed in lukewarm water, with ivory or any similar soap which does not contain much alkaline matter. Lay the garment on a board, scrub thoroughly with a coarse brush. Do not under any circustance rub the soap directly on the khaki, as this is injurious.

Garments should be wrung out with the hand and rough dried.

Correct ironing is essential because a garment after being rough dried is badly wrinkled. The garment and all its parts should therefore be gently pulled into shape and then ironed while damp.

Special precaution should be taken:

1. Not to use strong alkaline soaps.
2. Not to use the so-called Quick Dirt Removers.
3. Not to let the water come to an excessive heat.

The Badges And Insignia*—The Badges and Insignia if correctly worn become parts of the Uniform, as definitely as the hat or the neckerchief. As a boy advances in Scouting he receives recognition of his increased skill and ability, and advancement in rank and leadership in the form of Badges and Insignia which are awarded him. The badges are all rich in meaning. They indicate the measure of service the Scout is prepared to render to others.

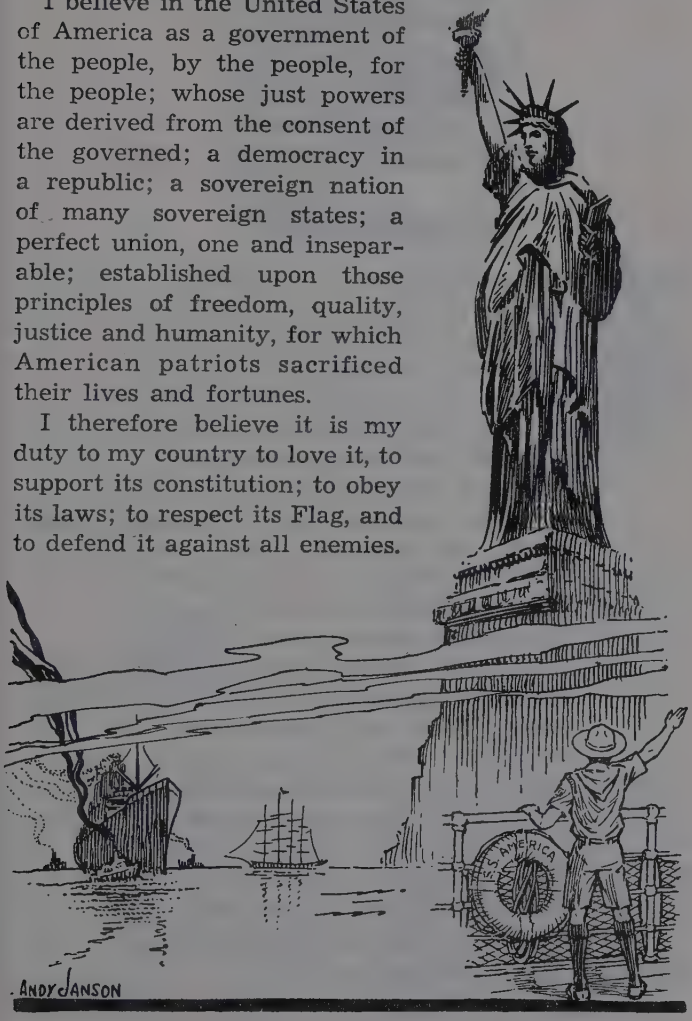
*See the illustrations in the color section.

THE AMERICAN'S CREED

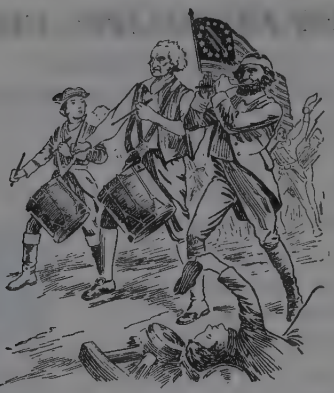
WM. TYLER PAGE
Chief Clerk, U. S. House of Representatives

I believe in the United States of America as a government of the people, by the people, for the people; whose just powers are derived from the consent of the governed; a democracy in a republic; a sovereign nation of many sovereign states; a perfect union, one and inseparable; established upon those principles of freedom, quality, justice and humanity, for which American patriots sacrificed their lives and fortunes.

I therefore believe it is my duty to my country to love it, to support its constitution; to obey its laws; to respect its Flag, and to defend it against all enemies.



Hats Off!



Hats off! Along the streets there comes
A blare of bugles, a ruffle of drums,
A flash of color beneath the sky;
Hats off! The Flag is passing by!
Blue and crimson and white it shines
Over the steep-tipped, ordered lines,
Hats off! the Colors before us fly;
But more than The Flag is passing by.
Sea fights and land fights, grim and great,
Fought to make and to save the State;
Weary marches and sinking ships;
Cheers of victory on dying lips;
Days of plenty and years of peace,
March of a strong land's swift increase;
Equal justice, right and law,
Stately honor and reverent awe.
Sign of a nation, great and strong
To ward her people from every wrong;
Pride and glory and honor, all
Live in the colors to stand or fall.
Hats off! Along the street there comes
A blare of bugles, a ruffle of drums,
And loyal hearts are beating high;
Hats off! The Flag is passing by!

—*H. H. Bennett*

Requirement No. 2 (a)

"Know the composition and history of The Flag of the United States of America"

My Flag

(The Flag of the United States of America)

MY FLAG! — whether floating proudly in the sunshine before the Capitol at Washington, or fluttering from a stern battleship ready to protect our liberties, or borne in loyal peace in school, church, or civic occasion—MY Flag! The Flag of MY America, home of liberty, soil of opportunity, tower of power rightly used—MY America!

The blue of My Flag represents Justice, like the eternal blue of the star-filled heavens—its white is for Purity, cleanness of purpose,—of word or deed —its red is the red life-blood of brave men and women, ready to die or to live worthily for their country.

What Is Back Of It?—When you've taken off your hat to The Flag—have you ever tried to see the long line of folk who made it possible?

Think for a moment! Under That Flag, government by the people first grew. Every brave man who struggled for liberty in civilization has given something to make such a flag possible. The builders of the pyramids who also built our alphabet—the thinking Greeks whose Leonidas with a handful of picked fighters, held the Persians at bay at Thermopylae long enough to save European civilization—the Romans with their law and citizenship wherever Caesar's legions went—the brave Von Winkelried, the Swiss patriot who opened for his comrades a hole in the line of Austrian spears by gathering an armload into his own breast—these men unknowing were making America's ideals possible.

The Magna Carta which the English Barons with swords in hand forced King John to sign—this gave us freedom from unlawful treatment and fixed our rights of trial by jury.

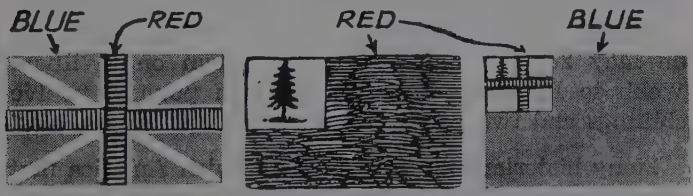
Columbus facing a trackless sea—storms without and mutiny within! Capt. John Smith of the Virginia Colonies, saved by Pocahontas from hostile Indians—the Mayflower with its Puritans—the Catholic settlers in Maryland, the French Priests from Canada to the Gulf, the Huguenots in the south, the Quakers in Pennsyl-

vania, all these helped to build, as have more recent millions, the America our Flag represents.

First Flags—Of course the first flags of the settlements were those of the nations whence they had come. Later all the Thirteen Colonies came under the flag of England. Gradually the Colonies felt the need of a new Flag of their own.

When the British Troops were besieged in Boston in 1775 (2 years after the Tea Party) the need for a flag led to the appointment of a Committee to plan a flag. Benjamin Franklin was Chairman. They recommended a flag of 13 stripes of alternate red and white with a union composed of the crosses of St. George and St. Andrew—still English by that emblem. On Jan. 2, 1776, this flag was first flown over Washington Headquarters before Boston.

About this same time, Boston had floating batteries in the harbor and the six "Washington" cruisers were on the high seas—they flew from their masts the Pine Tree



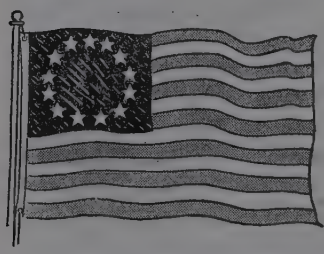
English Flag | Continental 1775-1777 | Bunker Hill 1775

Rattlesnake Ensign

Pine Tree Flag

Flag. The Declaration of Independence of course settled the fate of the "Union" Flag. The Continental Navy therefore used the Rattlesnake Ensign, showing a rattler with 13 rattles on the face of the Stripes. Most vital interest, however, centers in our Old Glory.

The Beginning Of Our Present Flag Of The United States—Washington was in Philadelphia at the request of Congress from May 22 to June 5, 1776. According to the Betsy Ross tradition, Washington (in the presence of Robert Morris and George Ross) actually pencilled the design after she had suggested the five-pointed star. This was her first Flag, but for the next half century her little upholstery shop at 239 Arch Street, produced and sold flags.



Indeed the Pennsylvania Naval records show that on May 26, 1777, an order was drawn on "William Webb to Elizabeth Ross for fourteen pounds, twelve shillings and two pence, for making ship's colors, etc."

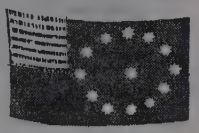
Many historians fix the battle in which America first fought under a Flag of Stars and Stripes as at Brandywine, in September, 1777. Other historians say it was at

Fort Stanwix (Schuyler) August 3, 1777. A Frenchman fired the first salute on February 14, of the next year, in honor of Capt. Paul Jones, as his Ranger entered the Harbor of Quiberon, France. Since then this Flag has been carried around the world by ship and by airplane as The Flag of a people who wish to be just.

On June 14, 1777, Congress in the midst of a series of Naval resolutions, passed the following: "Resolved that The Flag of the thirteen United States be thirteen stripes, alternate red and white; that the Union be thirteen stars, white on a blue field, representing a new constellation." This made Old Glory our official Flag.

We observe Flag Day (June 14) to commemorate this event. It is the official birthday of The Flag of the United States of America, which is its correct full name. When Vermont and Kentucky had come in, new stripes and new stars were added in 1795. It was this fifteen-striped Flag that flew over Fort McHenry in Baltimore Harbor on that historic night of September 13, 1814—described in our National Anthem.

This fifteen-striped Flag continued to be the official Flag until 1818 although five more States had come in (see page 60). It had then become apparent that a stripe added for every new State would soon render The Flag unwieldy and unsymmetrical, so on April 4, 1818, a bill was signed by President James Monroe restoring the design of The Flag to the original thirteen stripes, but one star for each State.



Stars Represent States—Starting in the upper left hand corner and reading each row from left to right, gives the star of each State in order, with the date of the State's ratification of the Constitution and admission to the Union as follows:

First Row: Delaware, 1787; 2) Pennsylvania, 1787; 3) New Jersey, 1787; 4) Georgia, 1788; 5) Connecticut, 1788; 6) Massachusetts, 1788; 7) Maryland, 1788; 8) South Carolina, 1788.

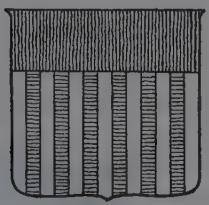
Second Row: 9) New Hampshire, 1788; 10) Virginia, 1788; 11) New York, 1788; 12) North Carolina, 1789; 13) Rhode Island, 1790; 14) Vermont, 1791; 15) Kentucky, 1792; 16) Tennessee, 1796.

Third Row: 17) Ohio, 1803; 18) Louisiana, 1812; 19) Indiana, 1816; 20) Mississippi, 1817; 21) Illinois, 1818; 22) Alabama, 1819; 23) Maine, 1820; 24) Missouri, 1821.

Fourth Row: 25) Arkansas, 1836; 26) Michigan, 1836; 27) Florida, 1845; 28) Texas, 1845; 29) Iowa, 1846; 30) Wisconsin, 1848; 31) California, 1850; 32) Minnesota, 1858.

Fifth Row: 33) Oregon, 1859; 34) Kansas, 1861; 35) West Virginia, 1863; 36) Nevada, 1864; 37) Nebraska, 1867; 38) Colorado, 1876; 39) North Dakota, 1889; 40) South Dakota, 1889.

Sixth Row: 41) Montana, 1889; 42) Washington, 1889; 43) Idaho, 1890; 44) Wyoming, 1890; 45) Utah, 1896; 46) Oklahoma, 1907; 47) New Mexico, 1912; 48) Arizona, 1912.

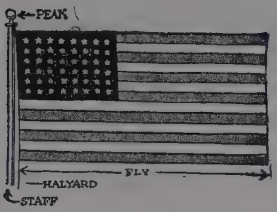


The Shield

The Seal of the United States

It should also be noted that The Shield of United States (which is taken from The Great Seal of the United States) has thirteen vertical stripes, seven white and six red (just the reverse of the stripes in The Flag with a blue chief *without* stars. Note that the Eagle in the Seal is facing his right, the danger point and therefore the point of Honor (the "Dexter," as distinguished from the left, "Sinister" a point of Dishonor.) The proportions of the Shield are as follows: Height, 6; Width, 6; Chief (Blue), 2.

The proportions of The Flag as prescribed by Executive Order of President Taft, October 29, 1912, are as follows:



Hoist (width) of Flag—1
Fly (length)—1.9
Hoist (width) of Union 7/13
Fly (length) of Union 0.76
Width of each strip—
1/13 of hoist
Diameter of Star—.0616
Width of each strip—1/13 of hoist

Flag Facts—"The Flag of the United States of America" is the official name of The Flag, and it should always be spoken or written of in this way. In the army it is called the "National Flag." When carried by an Infantry Regiment (or by any foot or unmounted unit) it is called a "Color." When carried by a Cavalry Regiment (or by any mounted, horse or motorized unit) it is called a "Standard."

The National salute to The Flag is 21 guns. The salute is not fired on Sunday unless required by international courtesy.

The Army Garrison Flag measures 20 x 38 feet; the Storm Flag and the Recruiting Flag are 5′ x 9′ 6″. The Post Flag, 10′ x 19′. The "Color" is 4′ 4″ x 5′ 6″ and the Standard is 3′ x 4′.

Bibliography Of Flag Books—"The Flag of the United States and Other National Flags"
Admiral Geo. H. Preble

"The Stars and Stripes and Other American Flags"
Pelig D. Harrison

"The Flag Number of the National Geographic Magazine" October, 1917

"The Birth of our Flag and Flag Etiquette"
Louis Bancroft Runk

Requirement No. 2 (b)

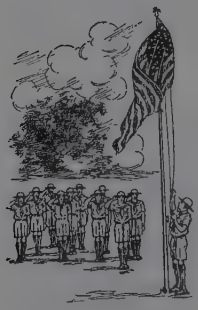
"And the customary forms of respect due to it."

In meeting the above requirement 2 (b), it is urged that the candidate be given the opportunity to actually use The Flag and extend respect to it. The test should involve the actual correct use, rather than "telling how."

The Scout will want to refer to The Flag page in the color section.

RESPECT DUE THE FLAG OF THE UNITED STATES OF AMERICA

It has been said that as a people we know very little about our Flag and are yet more careless in observance of the laws of respect due it. During street parades thousands fail to stand at attention and salute their Flag. It is important therefore, that Scouts—as good citizens—should know about their Flag and modestly help to set the proper example for its use.



The Pledge Of Allegiance — Pledges of allegiance to The Flag, while prescribed in some countries, are unofficial in the United States, except the Oath of Allegiance to the United States.

In the Scout Movement it is required by the National Constitution and By-Laws that every commissioned officer shall be an American citizen; or have declared intention to become such. Minors shall take an oath of allegiance to The Flag and the Government of the United States.

Scouts use the standard form of pledge to The Flag of the United States of America:

"I pledge allegiance to The Flag of the United States of America and to the Republic for which it stands; one Nation indivisible, with liberty and justice for all."

When taking this pledge in ranks the Scout salutes at leader's command and holds the salute through the entire pledge. If taking it as an individual, he salutes, holding the salute through the entire pledge.

Saluting The Flag—"Face The Flag." Saluting The Flag by individuals and organized civic or military bodies is an almost universal custom in every country.

Salute To The Flag—(At "Retreat," playing of National Anthem, and other Ceremonies.)

Scouts NOT IN RANKS On All Scout Occasions—In Uniform:—Come to attention and salute.

Not in Uniform:—Hold hat in right hand with hand over heart, or if without a hat, then stand at attention, holding the right hand over the heart.

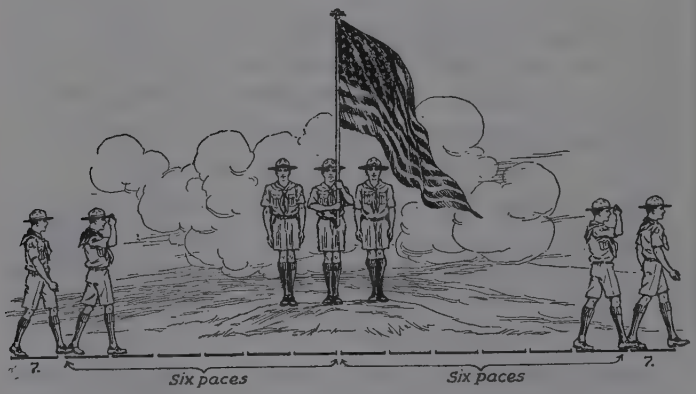
Scouts IN RANKS—In Uniform or not:—All salute but (for uniformity) command may be given by Scoutmaster.

In either case, position is held from the first to the last note of the bugle or the band.

In saluting The Flag incident to the Pledge of Allegiance as pupils, in school, Scouts should use the form and procedure prescribed by school authorities.

Outdoors—During the ceremony of hoisting or lowering The Flag all persons present should face The Flag, stand at attention and salute. The salute to The Flag in the moving column is rendered at the moment The Flag passes.

When The Flag Is Passing on parade or review, the spectators, if walking, should halt, or if sitting should rise and stand with their hats placed over the heart until The Flag has passed. This salute should be rendered for *every* Flag that passes. Women should salute by placing the right hand over the heart. A Scout in Uniform keeps his hat on and salutes, commencing his salute a short period before the Colors reach a point opposite him and holding it until they have passed. If not in Uniform, he uncovers and stands at attention. If in ranks, the salute may, for uniformity, be given together on command.



When Passing The Flag the Scout comes to salute six paces before reaching The Flag and holds it until six paces past. If in ranks, each minor unit salutes

together at the command of its leader. If not in uniform, one uncovers and faces The Flag while passing.

Flag In A Room—A Flag unfurled and hung in a room in which officers or enlisted men of the Army are present will be saluted by them the first time they may have occasion to pass it, but not thereafter. (From U. S. War Dept. "Flag Circular.") This rule should apply with Scout Officials and Scouts.

When Color Guards Salute

The proper procedure for Color Guards with reference to the Pledge of Allegiance, when passing another United States Flag, or on other occasions is as follows: The Scout actually handling The Flag does not salute because his hands are occupied with The Flag, the other members of the Color Guard salute; if The Flag is in a stand so that no one is actually handling it, then all members of the Color Guard salute.

"The Star-Spangled Banner"

When the National Anthem is played, those present in uniform should salute at the first note of the Anthem, retaining this position until the last note of the Anthem. When not in uniform, men should remove the headdress and hold it as in the salute to The Flag. Women should render the same salute as to The Flag. When there is no Flag displayed, all should face toward the music.

When "The Star-Spangled Banner" is played as a whole by the band or on a formal occasion, every Scout should stand at attention with the hand raised to the brim of the hat (or at Scout Salute if in uniform, without hat), and he should retain that position until the last note of the music, when the hand should be dropped to the side. This should be done when The Flag is lowered at Retreat, and the band plays "The Star-Spangled Banner" or the bugler sounds "To the Colors." All Scouts in uniform and out of ranks should face toward The Flag.

Laws Protecting The Flag

Numerous laws provide penalties for the desecration, mutilation and improper use of The Flag of the United States.

The Department of Justice has issued a warning against desecration of The Flag of the United States by aliens in the following words:

"Any alien enemy tearing down, mutilating, abusing or desecrating The United States Flag in any way will be regarded as a danger to the public peace or safety within the meaning of regulation 12 of the proclamation of the President, issued April 6, 1917, and will be subject to summary arrest and punishment."

A Federal Law (approved Feb. 8, 1917) provides that trademarks cannot be registered if they use, "The Flag, coat-of-arms or other insignia of the United States, or any simulation thereof."

It has been further determined that this applies to advertising of any kind.

The Postal Department does not object to the use of envelopes bearing pictures of The Flag if placed on the back so that cancellation of the stamp will not desecrate The Flag.

What To Do With Worn-out Flags

Flags of historic value, are carefully preserved, together with the historic record.

"Old or worn-out Flags should not be used either for banners or for any secondary purpose. When a Flag is in such condition that it is no longer a fitting emblem for display, it should not be cast aside nor used in any way that might be viewed as disrespectful to the National Colors, but should be destroyed as a whole, privately, preferably by burning or some other method lacking in any suggestion of irreverence or disrespect due the emblem representing our country."—(From "Flag Circular" issued by the War Department April 14, 1923.)

When To Fly The Flag

The Flag of the United States should be displayed on:

Lincoln's Birthday	February 12
Washington's Birthday	February 22nd
Mother's Day	Second Sunday in May
Memorial Day	May 30th
Flag Day	June 14th
Independence Day	July 4th
Labor Day	First Monday in September
Armistice Day	November 11th

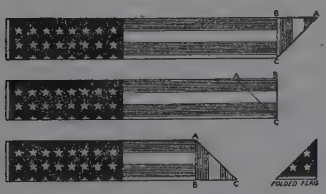
However, when possible, The Flag should be flown every day, weather permitting.

In many towns and cities, Scouts are made official guardians of The Flag, raising and lowering it daily in school yards or public squares.

Flags should not be permitted to fly on civilian property before sunrise or after sunset. The Flag should always be hoisted briskly, and lowered slowly.

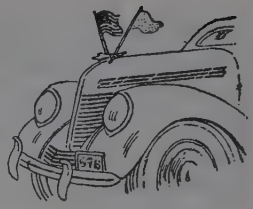
When The Flag is lowered, exercise the greatest care that no part of it shall touch the ground nor anything beneath it. It is carefully folded into the shape of a cocked hat. The usual method of folding is below.

It may be remarked in this connection that there are only three buildings in America over which The Flag of the United States flies officially night and day continuously, viz., over the east and west fronts of the National Capitol, over the House of Representatives Office Building and over the Senate Office Building. The two Flags flying over the Capitol are replaced as often as their appearance is unsatisfactory. The Flag flies over the White House from sunrise to sunset, but only when the President is present in Washington.



Steps in Folding The Flag

Displaying The Flag



Through usage and agreement among patriotic societies following a National Flag Conference, certain fundamental rules based on heraldry and good taste have been developed into a Flag Code. The National Flag represents the living country and is itself considered as a living thing. The Union of stars of The Flag is the honor point; in ancient times the sword arm was the point of danger and hence, of honor.

As you look at the "living" Flag its right is your own left, see code items 2, 3, 6, and 8, below.

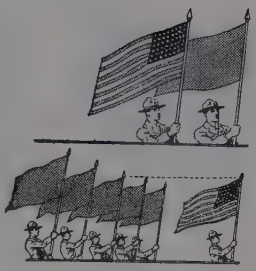
This becomes clear when you remember that The Flag is not mere material, but a living symbol, without front or back, but all Flag through and through—and its own right and left. When not on a staff the hoist becomes the head and honor point. If on a staff, then the peak of the staff becomes the head and honor position, next to which the union is placed. When displayed in a window it should be placed the same way; that is, with the Union or blue field to the left of the observer in the street.

The Flag Code*

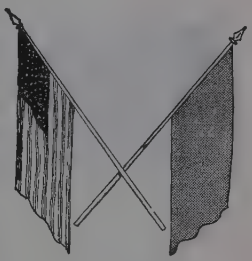
1. The Flag should be displayed only from sunrise to sunset, or between such hours as may be designated by proper authority. It should be displayed on national and state holidays and on historic and special occasions. The Flag should always be hoisted briskly and lowered slowly and ceremoniously.

* See The Flag page in the Color Section.

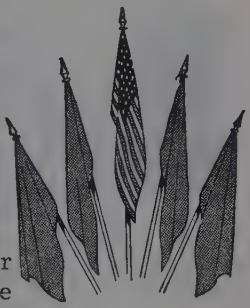
2. When carried in a procession with another flag or flags, The Flag of the United States should be either on the marching right, i.e., The Flag's own right, or when there is a line of other flags The Flag may be in front of the center of that line. No flag is ever displayed to the right of The Flag.



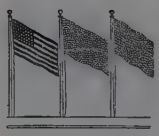
3. When displayed with another flag against a wall from crossed staffs, The Flag of the United States should be on the right, The Flag's own right, and its staff should be in front of the staff of the other flag. Two United States Flags should never be thus displayed.



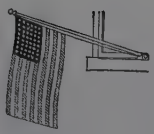
4. When a number of flags are grouped and displayed from staffs, The Flag of the United States should be in the center or at the highest point.



5. When flags of States or cities or pennants of societies are flown on the same halyard with The Flag of the United States, The National Flag should always be at the peak. When flown from adjacent staffs The Flag of the United States should be hoisted first. No flag or pennant should be placed above or to the right of The Flag of the United States.



6. When flags of two or more nations are displayed they should be flown from separate staffs of the same height and the flags should be of approximately equal size. (International usage forbids, in time of peace, the display of the flag of one nation above that of another nation.)



7. When The Flag is displayed from a staff projecting horizontally or at an angle from the window sill, balcony, or front of the building, the union of The Flag should go clear to the head of the staff unless The Flag is at half mast.

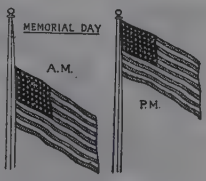
8. When The Flag of the United States is displayed in a manner other than by being flown from a staff it should be displayed, either horizontally or vertically against a wall, with the union uppermost and to The Flag's own right, i.e., to the observer's left. When displayed in a window it should be displayed the same way. When festoons, rosettes, or drapings of blue, white and red are desired, bunting should be used, but never The Flag.

9. When displayed over the middle of a street, as between buildings, The Flag of the United States should be suspended vertically with the union to the north in an east-and-west street, or to the east in a north-and-south street.

10. When used on a speaker's platform, The Flag, if without its staff, should be displayed above and behind the speaker. It should never be used to cover the speaker's desk nor to drape over the front of the platform. If flown from a staff it should be on the speaker's right, and a bit in front.

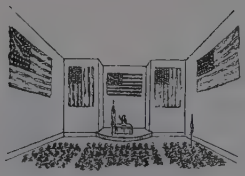
11. When used in unveiling a statue or monument, The Flag should not be allowed to fall to the ground but should be carried aloft to wave out, forming a distinctive feature during the ceremony. The Flag should never be used as the unveiling material.

12. When flown at half staff, The Flag is first hoisted to the peak and then lowered to the half-staff position. Before lowering The Flag for the day it is first raised again to the peak. On Memorial Day, May 30th, The Flag is displayed at half staff from sunrise until noon and at full staff from noon until sunset, for the Nation lives and The Flag is the symbol of the living Nation.



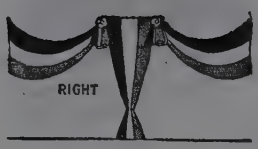
13. When used to cover a casket The Flag should be placed so that the union is at the head and over the left shoulder. The Flag should not be lowered into the grave nor touch the ground. The casket should be carried foot first.

14. When The Flag is displayed in the body of an auditorium or church it should be from a staff placed on the congregation's right as they face the clergyman. The service flag, the state flag, or other flag should be at the left of the congregation. If in the chancel, or platform, The Flag of the United States should be placed on the clergyman's right as he faces the congregation and other flags on his left.



15. Flags flown from fixed staff are placed at half-staff to indicate mourning. When displayed on a small staff, as in a parade, mourning is indicated by attaching two small streamers of black crepe to the spear head, allowing the streamers to fall naturally. Crepe is used on the flag staff only by order of the President.

16. Use bunting for decoration. The blue color in the bunting should invariably be at the top. The correct order of the Colors is blue, white and red. If the blue in the bunting should contain stars, it would emphatically indicate that the stars be on top, for if placed below, it would be equivalent to placing The Flag upside down.



Cautions

1. Do not permit disrespect to be shown to The Flag of the United States of America.

2. Do not dip The Flag of the United States of America to any person or any thing. The regimental color, State flag, organization or institution flag dips.

3. Do not display The Flag with the union down except as a signal of distress.

4. Do not place any other flag or pennant above or, if on the same level, to the right of The Flag of the United States of America.

5. Do not let The Flag touch the ground or the floor, nor anything beneath it, or trail in the water.

6. Do not place any object or emblem of any kind on or above The Flag of the United States of America.

7. Do not use The Flag as drapery in any form whatsoever. Use bunting of blue, white and red.

8. Do not fasten The Flag in such manner as will permit it to be easily torn.

9. Do not drape The Flag over the hood, top, sides or back of a vehicle, or of a railroad train or boat. When The Flag is displayed on a motor car, one flag only, the staff should be affixed firmly to the chassis, on the right hand side, or clamped to the radiator cap.

10. Do not display The Flag on a float in a parade except from a staff.

11. Do not use The Flag as a covering for a ceiling.

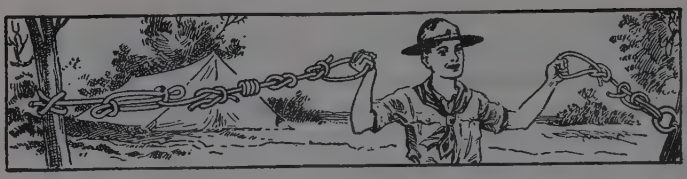
12. Do not carry The Flag flat or horizontally, but always aloft and free.

13. Do not use The Flag as a portion of a costume or of an athletic uniform. Do not embroider it upon cushions or handkerchiefs nor print on napkins or boxes.

14. Do not put lettering of any kind upon The Flag.

15. Do not use The Flag in any form of advertising nor fasten an advertising sign to a pole from which The Flag is flown.

16. Do not display, use or store The Flag in such a manner as will permit it to be easily soiled or damaged.



Requirement No. 3

"Tie the Square Knot and any eight of the following knots: Sheet Bend, Bowline, Fisherman's, Sheepshank, Slip, Clove Hitch, Timber Hitch, Two Half Hitches, Carrick Bend, Miller's Knot, Rope Halters, Pipe Hitch, Stevedore, Barrel Hitch, Girth Hitch, Binder Twine Bend, Lariat Loop, Hitching Tie."

To use ropes and cords one must know how to make them *hold.* Knots, therefore, are in constant use by sailors, explorers, mountain climbers, engineers and mechanics.

Useful Knots

Three things we expect of a good knot.

(a) That it can be tied quickly.

(b) That it will hold fast.

(c) That it can be easily untied.

Elementary Terms—Before going any farther, let us identify a few terms about knots.

The Standing Part—This is the long end of the rope. Sometimes it isn't used at all; sometimes it is the part around which the rope end is turned as in making hitches for example.

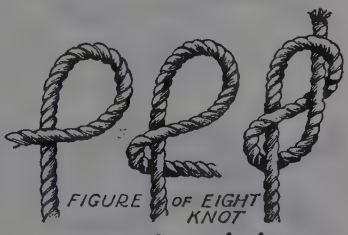
The End (or running part) is the short free end, which by being interwoven with the standing part or the end of another rope forms the hitch or knot.

The Bight is formed by bending the rope, keeping the two parts parallel alongside each other.

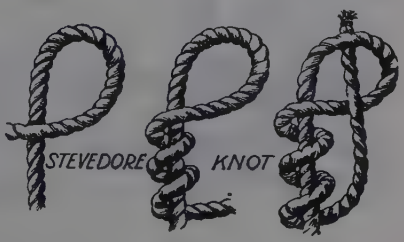
The Loop is made out of a bight by simply crossing the two parts.

A rope always consists of the standing part and the end, and all the Tenderfoot knots are formed by combining bights and loops in different ways.

(A)—End Knots



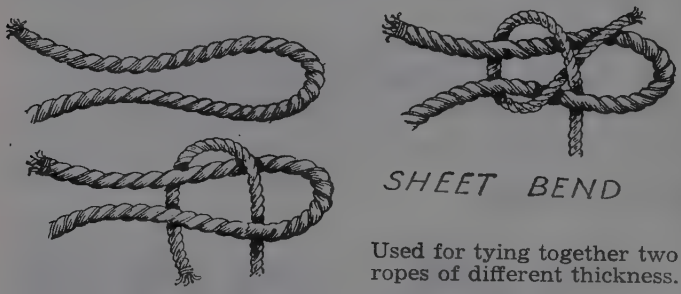
The Overhand and the Figure of Eight Knots should be known by all Scouts though they are not parts of the Tenderfoot requirements.



(B)—Knots for Tying Two Ropes Together

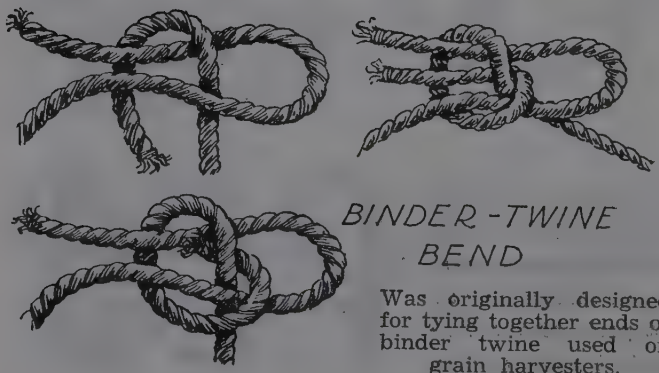
SQUARE KNOT (REEF KNOT)

The commonest knot for tying two ropes of even thickness together, frequently used in First Aid bandaging. Never slips or jams unless it catches on an object and fouls; easy to untie.



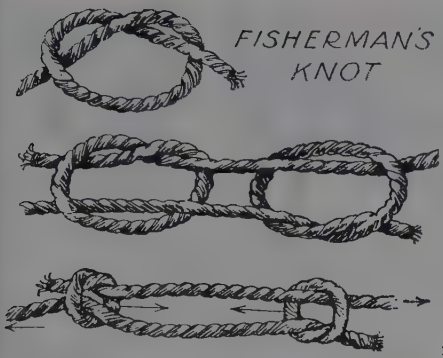
SHEET BEND

Used for tying together two ropes of different thickness.

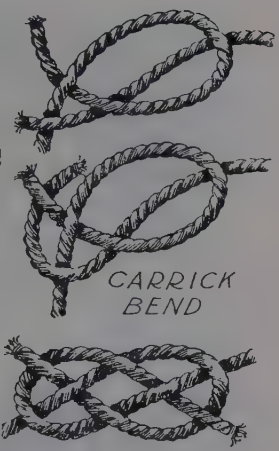


BINDER-TWINE BEND

Was originally designed for tying together ends of binder twine used on grain harvesters.

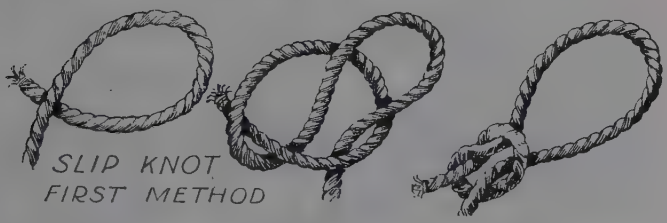


Used by fishermen for joining strands of gut.

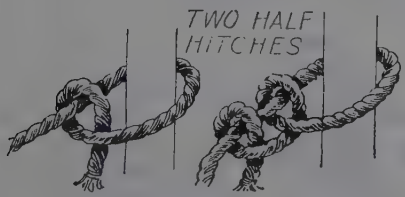


Used for joining heavy or stiff ropes together.

(C)—Knots Used for Tying Rope to an Object

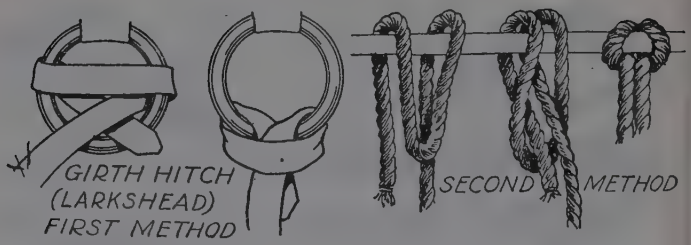


A very common knot for forming a noose, but is inferior to two half hitches.

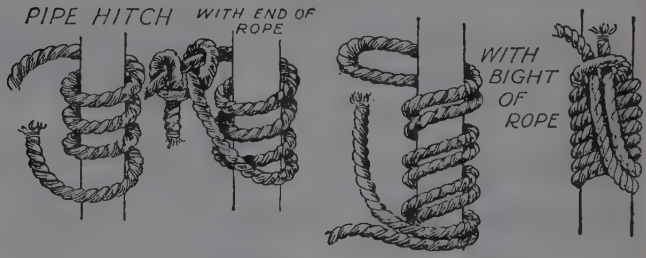


Used for tying rope to pole.

Used for dragging logs.

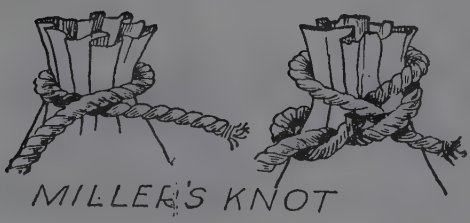


Used for fastening saddle to a horse.



Used for pulling cylindrical objects.

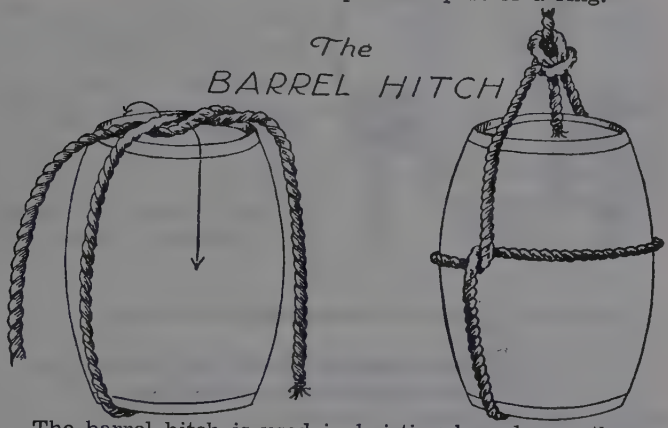
Clove hitch is the most used of all hitches, it being very easy to tie and not at all apt to slip.



Miller's knot is used for tying sacks of flour, grain, etc., on the farm and in the store.

HITCHING TIE

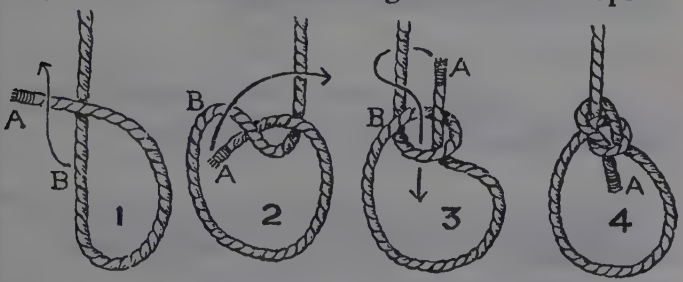
Used for tying halter ropes to a post or a ring.



The BARREL HITCH

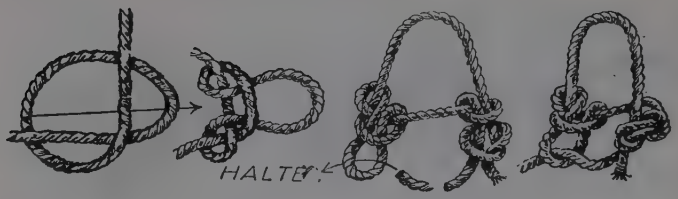
The barrel hitch is used in hoisting barrels or other cylindrical objects.

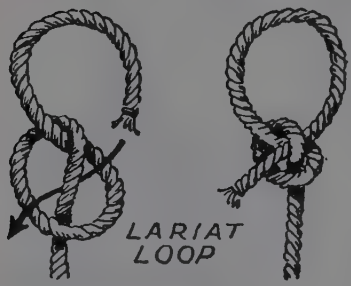
(D)—Knots Used for Making Permanent Loops



BOWLINE — SAILOR'S METHOD

A very important knot. Forms a loop that will not slip. Used for several life saving purposes, as well as for fastening horse or boat to a post.

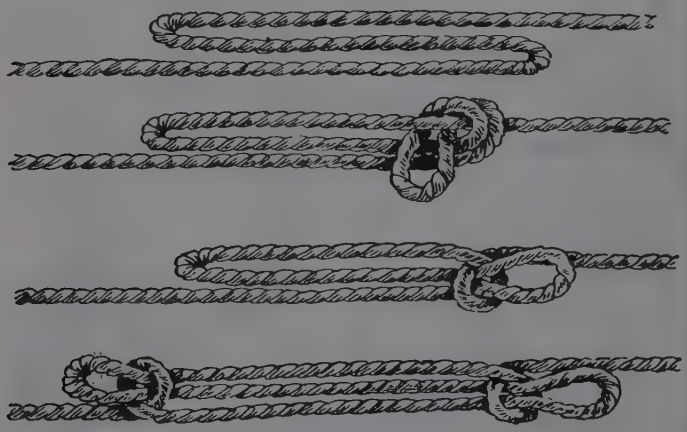




The rope halter is used to put over the neck of cattle and young stock, and often also for horses, to make it possible to lead them and fasten them to a post.

The lariat loop is used for making a lariat, out of an ordinary rope.

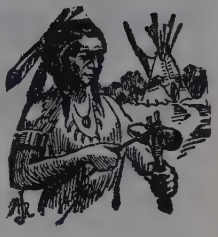
(E)—Knots Used for Shortening the Rope



SHEEPSHANK

Used for shortening a rope. Only holds as long as there is a strain on it.

Ropes



From the very dawn of human intelligence men have found it necessary to fasten things together.

Vines, tree bark, branches, as well as strips of animal hides and leather have served us.

Ropes (anything over 1 inch in diameter) and cords and twines and even threads are our more modern means to the same end. In camping, on board ship, in lumber camps, about cranes and derricks and pulleys, indeed even as belts in factories, ropes and cords are in constant use. The farmer uses them constantly.

All sewing is dependent upon threads and cloth is merely groups of such threads woven together.

These are made from fibres found in the leaves or stems of plants, or from animal wools.

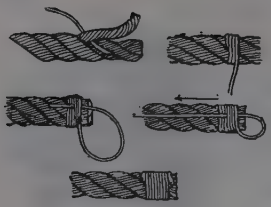
Common hemp is the fibre most often used for rope though cotton ropes are more flexible and very durable. Manila hemp is used for stiff heavy ropes, Sisal from Central America is extensively used especially in binder twine. Indian jute is also used because of its cheapness.

When the fibres have been combed out of the leaves the following steps occur:

A few fibres twisted together to right to form yarn: Then a few yarns twisted together to left to form a strand.

Three strands twisted together to right to form a hawser; hawsers twisted together to left to form a cable.

One way to whip the end of a rope or cord. Pull loop through to finish



How to whip the end of cord or rope.

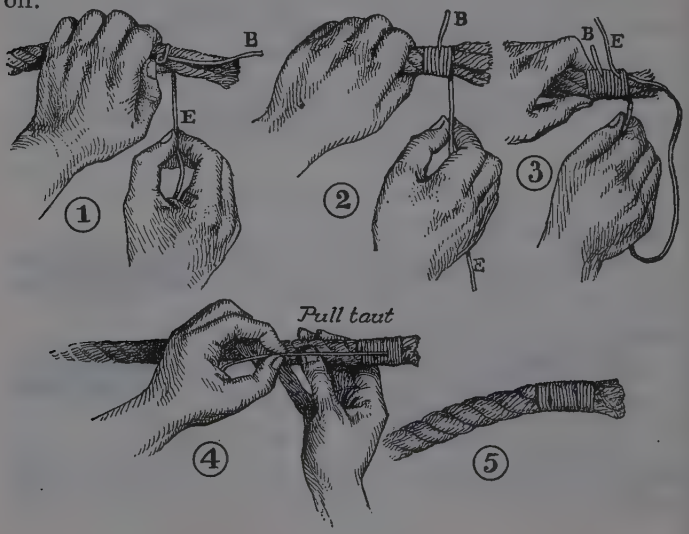
A one inch rope may have as many as 300 individual threads and the friction of each against the others gives holding strength to the rope.

Take a small piece of string and separate it back as far as you can toward its fibres. The nature of the rope, then, is such that its ends will fray or separate and gradually unravel.

It is important, therefore, to "whip" the ends of your rope. Each Scout should have a small length of say quarter inch cord for learning these knots—for they can only be learned by doing them.

This is one of the sailor's first secrets.

The idea is to "bury" the two ends so they are held by the other loops. After making several turns in (3) the end E can be pulled tight under those turns and cut off.



CHAPTER V

"YOUR PATROL BELONGS TO YOU"

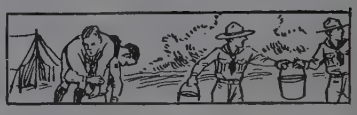
To every Scout should come the double-barrelled reminder: "You belong to a Patrol, but your Patrol belongs to you. Its spirit is what you Patrol members make it."

Eight Scouts make up a full Patrol. Two of their number serve as Patrol Leader and Assistant. Four such Patrols make the regular sized Troop of 32. They are much more than organization units, however, they are the units of Scout activity. Each Patrol is a little Democracy of chums. It is a team of friends with each ready to help another.

It is undoubtedly true that, next to family, friends are the most valuable and most important possessions in the world. The Scout Patrol, therefore, says to each Scout in it:

"Here is your very own little circle of pals. To get much done or have much fun, your Patrol must be friendly. This it can only be if *you* are friendly. You will find in your Patrol pretty much what you put into it.

Most Patrols hold meetings in various homes, once a week between Troop meetings. Some meet more often. Here you help each other get on in advancement. Here, together, you plan your Patrol's part in various Troop doings.



Together, also, you will hike and explore the out-of-doors.

Together you render service to people who need your help and to your community. Stick together, loyally. That's the way to have a good Patrol!"

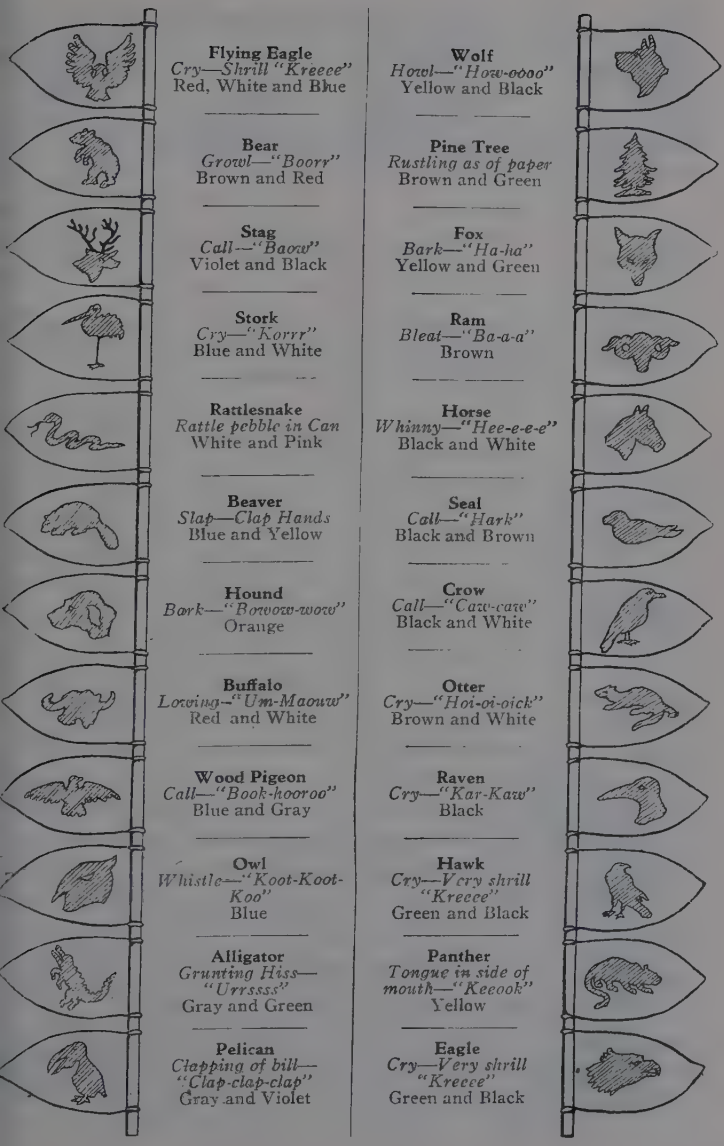
Patrol Good Turns—One activity which will give a Patrol lots of fun and make a host of friends for it, is for the Patrol, working together, to find chances to do Good Turns about the homes or churches or public buildings of the Patrol's own neighborhood. Try it!

Patrol Friendships

A Scout Patrol is a great place to develop friendships. A fine group of fellows have come together, each wanting to be a real Scout and in the Patrol and Troop because he wants to be there.

The important thing is to keep that fine spirit—to have fun together but not at the expense of the other fellow. Everybody is a bit sensitive and it is very easy to hurt a fellow's feelings. If one of the fellows is slow, don't kid him about it—quietly help him master his signaling or his First Aid. The fellow who is tall or short, fat or thin, red-headed or tow-headed, can't help it—therefore is it fair to kid him?

A gentleman will laugh with people but not at them. So in the Patrol each must help the other fellow—treat him with all the respect of which one is capable. Thus friendships will grow based on kindness and fairness.



Flying Eagle
Cry—Shrill "Kreeee"
Red, White and Blue

Wolf
Howl—"How-oooo"
Yellow and Black

Bear
Growl—"Boorr"
Brown and Red

Pine Tree
Rustling as of paper
Brown and Green

Stag
Call—"Baow"
Violet and Black

Fox
Bark—"Ha-ha"
Yellow and Green

Stork
Cry—"Korrr"
Blue and White

Ram
Bleat—"Ba-a-a"
Brown

Rattlesnake
Rattle pebble in Can
White and Pink

Horse
Whinny—"Hee-e-e-e"
Black and White

Beaver
Slap—Clap Hands
Blue and Yellow

Seal
Call—"Hark"
Black and Brown

Hound
Bark—"Bowow-wow"
Orange

Crow
Call—"Caw-caw"
Black and White

Buffalo
Lowing—"Um-Maouw"
Red and White

Otter
Cry—"Hoi-oi-oick"
Brown and White

Wood Pigeon
Call—"Book-hooroo"
Blue and Gray

Raven
Cry—"Kar-Kaw"
Black

Owl
Whistle—"Koot-Koot-Koo"
Blue

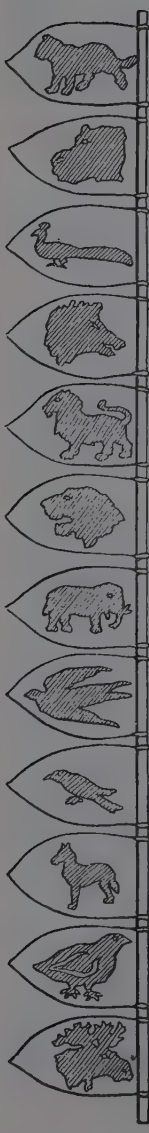
Hawk
Cry—Very shrill "Kreeee"
Green and Black

Alligator
Grunting Hiss—"Urrssss"
Gray and Green

Panther
Tongue in side of mouth—"Keeook"
Yellow

Pelican
Clapping of bill—"Clap-clap-clap"
Gray and Violet

Eagle
Cry—Very shrill "Kreeee"
Green and Black



Cat
Cry—"Meeaow"
Gray and Brown

Hippo
Hiss—"Brrussssh"
Pink and Black

Peacock
Cry—"Bee-oik"
Green and Blue

Wild Boar
Grunt—"Broof-broof"
Gray and Pink

Lion
Roar—"Eu-ugh"
Yellow and Red

Tiger
Purr—"Grrao"
Violet

Elephant
Prolonged "Tal-loo-e"
White and Blue

Swallow
Whistling twitter
Khaki and Blue

Sea Gull
Call—"Kaw-hawk"
Gray

Jackal
Laughing cry—"Wah-wah-wah-wah-wah"
Gray and Black

Bob-White
Whistle—"Bob-bob-White"
White and Khaki

Moose
"Oh-ah, oh-ah, oh-ahhh"
White and Gray

Cobra
Hiss—"Pssst"
Orange and Black

Woodpecker
Call—"Tap-tap"
Green and Violet

Curlew
Whistle—"Curley"
Green

Bat
High thin squeak
Black and Khaki

Peewit
Whistle—"Tewitt"
Green and White

Kangaroo
Call—"Coo-ee"
Red and Gray

Black Bear
Growl—"Boorr"
Khaki and Red

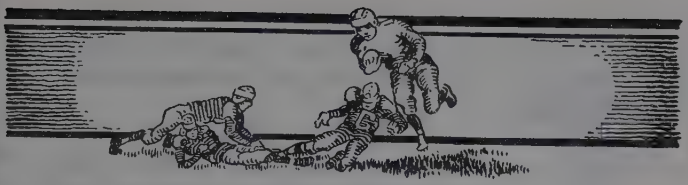
Antelope
Call—Shrill snort
Khaki and Green

Cuckoo
Call—"Cook-koo"
Gray

Racoon
Shrill-whine—"Mmm Mmm"
Black and Brown

Rhinoceros
High pitched grunt—"Mmgh-mmgh"
Khaki and Orange

Hyena
Laughing cry—"Ooowah-oowah-wah"
Yellow and Brown



CHAPTER VI

GETTING ON THE TEAM

By FIELDING H. YOST

Director Intercollegiate Athletics, Professor Physical Education, University of Michigan

Getting on the team—whether it is the team of the smallest village school or of the greatest university—is in many respects one and the same thing. Certain rules must be observed. Certain principles must be followed. Certain guides of conduct must be ever before you. And how closely these rules and principles and guides follow the code of the Scout!

Like a Scout, to make the Michigan team, for example, you must be clean through and through. You must be above stooping to unfair and unsportsmanlike practices. You must view the game not as an end in itself but as an opportunity to prepare for the bigger game of living. Making the Team at Michigan is not confined to the gridiron, the diamond, the field or the court or cinder track. You must be more than an athlete. You must be a gentleman — otherwise the lessons of the game will mean

"Hurry-Up" Yost

nothing to you and you will leave behind you an athletic career of little more than wasted effort.

Attitude counts in getting on the team. You should look at sports in their proper relation to other things of life. You must get in the frame of mind where you are ready to go limitless sacrifices to win as a sportsman wins and where you would not turn over your little finger to gain victory by unfair means.

Physical condition is, of course, a great factor in getting on the teams. There are training rules to be observed. You may eat certain things and there are things you must not eat. You must be abed at a certain hour. You must do nothing to weaken body or mind. Every physical function must be in tune. Mere muscular strength is not so important as agility, both bodily and mental. Learn to think fast and act fast. Out-think and out-act your opponent. Be on your toes. Throw yourself into the job of playing your best.

The moral aspect of getting on the team is more important than might be supposed. In the first place, no coach wants a man on his team, associating with other players, who is an unfit companion for them. In the second place, no man given over to dissipation can stand the gaff. He quickly tires. He is the type who usually lacks courage at the crucial moment. He cannot take punishment and come back smiling. The coach knows all this—and a moral coward stands no chance at all in the athletic game, any more than in the game of life later on.

The mental, moral and physical things are therefore of greatest importance. This is the Great Trinity of Success—in anything. Show me a man who ranks high in each of these three things and I will point out a man who will succeed in any game of athletics or life.

To be even more specific, let us take the Scout Law and show how it applies to athletics.

A Scout Is Trustworthy

This is one of the most important factors in building an athletic team where every man must work in harmony and sympathy with every other; where a player must forego the opportunity of brilliant "grand stand" playing so that his team, *as a unit,* may function as a team and not as a collection of individual players. An athlete must be trustworthy. He must be on time. He must be entrusted with secret plays and other strategic knowledge. He must be the type of man who will follow instructions.

A Scout Is Loyal

Loyalty is one of the great attributes of the truly great athlete. In the rush of play, amid the roars of the stands, his loyalty must become a flame to light his brain, point out his road to gain or sacrifice and drive him on and on and on no matter how his tired body rebels or his mind says, "It's time now to rest." Loyalty, learned on the field of athletics is a blessed heritage of college days. It is a bulwark thrown up against life's temptations.

A Scout Is Helpful

Your true sportsman forgets self in helping his teammates. On the gridiron, he must be ready to throw his body between his mate and the charge of opponents. He must be ready to cooperate, for it is cooperation and cooperation only that makes a TEAM.

A Scout Is Friendly

And so is your athlete who makes the team. He must be in constant association with his fellow players. He is a watched man. His smile and his handshake must be spontaneous and sincere. A team of men friendly to one another becomes fused into a unit far quicker than one composed of men steeped in jealousy, envy and always at cross purposes.

A Scout Is Courteous

An athlete who is also a sportsman is likewise courteous. You have seen a football player help a member of the opposing team to his feet. You have seen a man protect an opponent from injury when he was down and out. This is not affectation or something to make the crowds feel good. It is courtesy, consideration, gentlemanliness—call it what you will, it is playing the game as a man who is a man plays it.

A Scout Is Kind

At Michigan we try to instill into the minds of every athlete this attribute of friendliness and courtesy. A man who learns how to be kind through his college years will graduate with the habit of being kind. He will be ready to overlook and forgive. He will face life a bigger, broader, better man. Yes, and a stronger competitor.

A Scout Is Obedient

Obedience to orders is an essential of winning games. There must be a directing head to everything. There must be some one to give orders or else every human

endeavor would be fraught with confusion and a team would become a mob instead of a highly intelligent composite of several men. In unison there is strength. Unison comes by obedience to a central power. Your idea may be just as good as the Coach's—perhaps better, but your team-mates look to your Coach for guidance. Give him your loyal obedience.

A Scout Is Cheerful

If a football team of mine at Michigan took the field in the second-half after a drubbing in the first-half with sour, glum faces, I would feel like throwing up my hands and leaving the side lines. Cheerfulness is the oil of life. It is what makes the machinery of living run smoothly. Be cheerful in the face of defeat and you will soon learn not to recognize defeat. When you do that, you will never lose.

A Scout Is Thrifty

This, strange as it may seem, is another important factor to be borne in mind in making the team. Thrift is saving. Save your strength. Avoid aimless running around. Don't tire yourself when it will do no good. Conserve your energy just as you save a reasonable portion of life's goods. This reserve strength will stand you in good stead later on when you need it most.

A Scout Is Brave

Every athlete must wipe fear from his mind to win. Fear is your enemy. If you want to get on the team, remember that bravery must be with you at all times, shoulder to shoulder, an invisible team-mate to give you confidence and keep your mind clear, alert and agile.

A Scout Is Clean

Athletics, requiring the greatest output of physical energy, depend for success upon a sound body. No body

but a clean one is sound. Bodily laziness like mental laziness and moral indifference spells disaster for the athlete in capital letters. Keep clean in every way—physically, morally, mentally.

A Scout Is Reverent

Reverence, as I interpret it, is a way of looking at the big, beautiful things of life. You revere honorable old age. You revere the Bible, your mother, your father. You honor and respect them all. You look up to them from the lower level of youth and inexperience with the world. To get the most from the team and your part in its success, look deep below the surface. There is your school. Perhaps it is just a small high school in a country village. But it is like the church in many ways. In this school of yours, you are taught to live a useful, happy, contented life. It is something of a shrine, this school of yours. Its teachers, who labor with you while you learn how to adapt yourself to a livelihood or further study, are our own missionaries. They sit back, out of the rushing stream of life and give their lives to Youth and you.

"What counts in getting on the Team?" I can sum it up in a sentence: *"Be a Scout—a Good Scout—You must keep yourself physically fit—mentally awake and morally straight*—if you wish to give yourself a fair chance to make the team.

CHAPTER VII

LET'S GO ON A HIKE!

To hike over hills and through deep valleys, under big trees and along murmuring streams is one of life's real pleasures. Fine air, fine exercise, the fun of seeing old friends in the woods and the fun of meeting new friends—birds, bees, beetles, blossoms, brooks. One can walk the woods for a lifetime and still find new joys therein.

And after the hike, a cool plunge and then the call to mess! ! !

For a Scout to enjoy his hiking he must know some of the things that veteran hikers have learned and have passed on to us. Indeed, adult leadership of hikes is a real safety measure.

1. Preparation

A Patrol Hike should be planned carefully ahead of time, at a Patrol meeting.

Every Scout should know the part he is to play to make the hike a success.

2. Equipment

Clothing—enough to keep warm while walking. Something wool for use when he stops and a poncho or slicker for rain.

Shoes—He makes sure his shoes are big enough. He avoids the agony of breaking in new shoes. Hiking is

done best in old shoes with strong soles. When canvas topped rubber shoes are worn they should be of the heavy-soled, arch-supported, reinforced type, especially adapted for hiking. Thin-soled, tennis (sneaker type) canvas shoes should not be worn for hiking. They give little support, cause hot feet, blisters and fatigue.

Stockings—More comfort if wool is worn, better ventilation and easier on the feet.

Food—Food supply should be carefully worked out in advance, perchance with some little, light extra "iron-ration" to use in emergencies.

First Aid Kit—It is wise to carry a simple First Aid kit to meet emergencies for oneself or someone who may need help. (See Official Scout Supply Catalog.)

Other Equipment—Knife, short rope, matches properly protected from moisture, perhaps a canteen with pure water. If going for overnight a pair of medium weight blankets will bring comfort. A poncho should be carried as a protection against the rain and as a ground cloth under blankets at night.

3. Sanitary Do's And Don'ts

Place food where ants or animals cannot molest it. Perishable foods will spoil if carried long. Drinking

water should be used only if known to be safe. A Scout is clean, so in meeting nature's needs he will see that all excrement is buried.

When swimming a Scout will follow good swimming practices, using the buddy system and having an experienced guard on duty.

4. Respect Property

Scouts are often given privileges in great forest preserves and public and national parks, because they respect the property and rights of the owners.

Trees must never be damaged; the Scout Axe is not a plaything—indeed many Councils allow only First Class Scouts to carry them.

Fires, should be built at proper distances from trees and dry grass and must be absolutely put out with water or sand and earth.

Fences, and all improvements, all livestock must be carefully protected for the farmer.

In Passing Houses, he passes quickly without loud disturbances.

Policing Grounds, after Scouts have used a site they should carefully remove all the waste paper, fragments of food, and similar waste and burn or bury—leaving the site clean and ready for someone else.

They *do not* trespass on railroad property nor enter private grounds or farms without special permission.

5. Remember

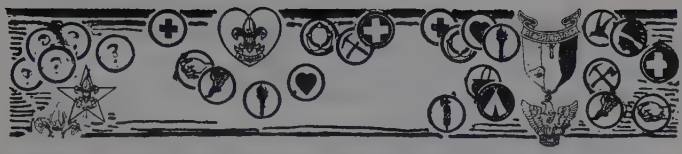
(a) A hike is not a speed event or a long distance endurance record. Soldiers on the march rarely average more than 15 miles a day.

(b) Parents' permission should be secured before going, and if delayed beyond time of proposed return, a message should be gotten to them.

6. Purpose

Hikes are most often to the woods. They may also be to the museum, or to some near-by factory where interesting processes may be seen. Hikes are sometimes made to nearby Historical Shrines—the oldest house—the first settlement—where some distinguished son of the community was born—to some farm, etc.

Hikes may be made for the sheer pleasure of enjoying God's out-of-doors and may also be used to meet Scout requirements and learn Scout outdoor craft.



CHAPTER VIII

EVERY SCOUT'S CHANCE TO ADVANCE

Advancing Along The Trail

Scouting provides an advancement ladder for every Scout to climb. It calls to every Scout

> " 'Come on!' As you and your fellow Scouts advance along the trail of Scouting, the things you do probably will fall into four groups:
>
> 1. *You attend Troop and Patrol Meetings*—and you enjoy them—in fact these meetings are full of good times.
>
> 2. *You advance in Rank* and in Scouting skills—2nd Class, 1st Class on to Eagle—and there's fun in that because those tell you how to get along in the out-of-doors.
>
> 3. *You enjoy your outdoor hikes and camps* where you use these Scouting skills.
>
> 4. *You practice the ideals and do Good Turns* in your own everyday contacts. You'll probably get a bigger thrill out of these Good Turns even than your games and camping."

Longfellow in the following verse whispers the secret of progress in life—it is work.

"The heights by great men reached and kept
Were not attained by sudden flight,
But they, while their companions slept,
Were toiling upward in the night."

However, Scout advancement is more fun than work. To learn to cook, to track, to swim, to camp, to give first aid are explorations that are packed full of fun.

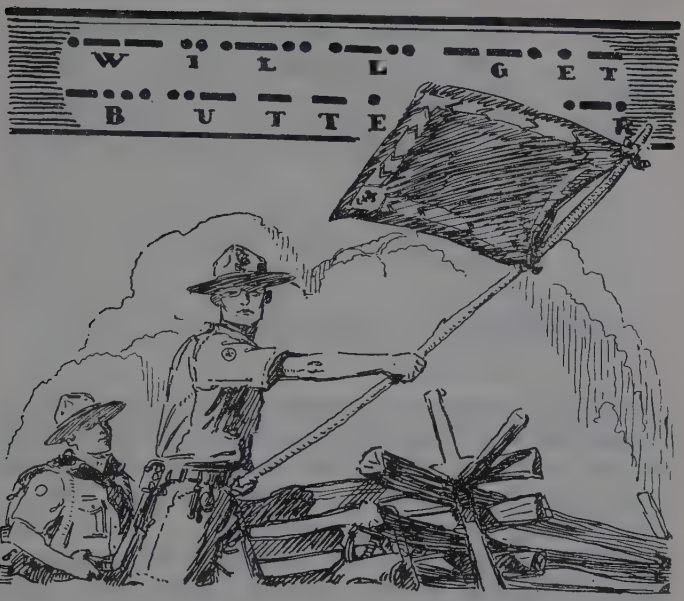
In each Troop, a new Scout should ask his Patrol Leader (or Scoutmaster) to explain how to go ahead to meet the advancement requirements.

The Tenderfoot Achievements

For the achievements which lead to Tenderfoot Rank, Patrol Leaders and Patrol mates help train the candidate and the Scoutmaster approves him as ready. The meaning of the Oath and Law and what it means to be a Scout should be talked through with the Scoutmaster.

The Second Class Achievements

The Patrol Leader or the Scoutmaster will explain the proper way to meet these requirements. Two things are important about them—one, to meet the requirements without having to travel long distances. The second item is that the Local Court of Honor, or Troop Committee serving as such, is responsible for having whatever is done, done well. In First Aid, for example, some other person's life may hinge on how well a first aid job is done! Many Second Class skills can be mastered on hikes.



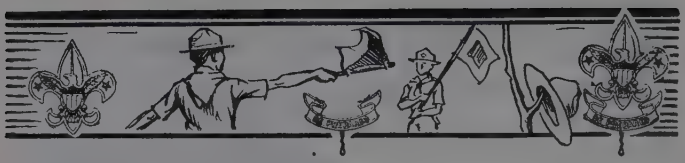
The First Class Achievements

The Scoutmaster will be glad to explain just how these First Class Requirements should be met. The same things apply here that were just stated for Second Class.

The First Class Adventure of the 14-mile Hike gives a chance to show that the Scout is "prepared" for the rank of First Class Scout.

The Merit Badges

Preparation for these is by special Counselors, and Badges are awarded by the Court of Honor. With isolated Troops, the Troop Committee may look after these Merit Badge achievements.



CHAPTER IX

THE SCOUT TROOP IN ACTION

Most of the hundreds of thousands of boys who enter Scouting do so by joining a Scout Troop. For those who live in a sparsely settled area, a Neighborhood Patrol may serve the few boys available—while the isolated boy may become a Lone Scout.

The regular size full Troop consists of four Patrols of eight Scouts each. Some Troops are smaller and some larger. Smaller Troops can often do a needed Good Turn to nearby boys by inviting them to join and share their Troop.

Who Makes This Troop Possible?

Every young American who has the privilege of joining a Scout Troop really should know of the interested men who have made the Troop possible.

Actually each Scout is indebted to three groups of men for his chance to be a Scout.

1. The National Council—took the first steps, when in 1910 they saw the great value of Scouting, and brought over Lord Baden-Powell's English plans, adapted them to American conditions and secured from Congress a Federal Charter (in 1916) which gives distinctive protection to the Movement and its Badges and Uniforms. They continue to create literature and plans

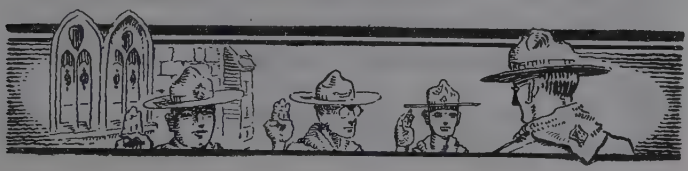
and to encourage all sections of our country to develop Councils to be of help to local boys. At least one-half the members of the National Council must be representatives of Local Councils.

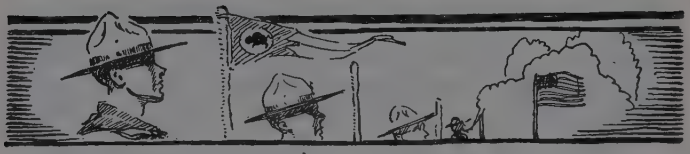
2. The Local Council—is a group of men interested in their boys and, who take the responsibility of bringing the nationally available program to the churches, schools, granges and groups of citizens in various neighborhoods, so that their boys may have the opportunity for Scout training. They raise needed funds for literature, headquarters, postage, training materials, camping facilities and for Scout Executives to help and train local leaders. At least one-half the members of the Local Council must be representatives of institutions or groups using the program.

3. The Sponsoring Institution — or group, as just stated, may be a church, school, lodge, grange or neighborhood group of men who want their boys to have the chance to be Scouts and they agree to provide a place of meeting, camping opportunity, leadership and oversight.

Through action of their governing body, they apply for the privilege of using the program. They provide a *Troop Committee* of three or more American citizens who are to be responsible. They find the man fitted to be *Scoutmaster* and aid him as needed in his operating of the Troop.

Every Scout owes a real debt to the institutional or group sponsors of his Troop and almost universally, Scouts, Patrols and Troops watch for and find chances to show that appreciation by many acts of cooperation and service to the institution.





4. The Scout Himself—of course, is a very important part of the Troop and can in large measure determine the spirit of a Troop, by the way he enters into what the Troop may be doing. Good spirit and team work are contagious; so are their opposites.

Troop Leaders Need Cooperation

Of all the interested men who help bring Scouting to a group of boys, the one man whom they will know best and look up to is the Scoutmaster. A few words about him and the other Troop leaders will be worthwhile to remind us of what they are trying to help their Scouts achieve. The poem on "The Scoutmaster" by Edgar A. Guest (see page 202) gives a very informing picture of the job. The Scout reading this poem will think of many ways in which he can help the Scoutmaster in his job.

1. The Scoutmaster—merits the special appreciation of his Scouts because he gives so many hours of his own time to the Scouts and the Troop. He is a volunteer giving this time without pay in the hope of helping each Scout to learn interesting and worthwhile things, to build himself into a fine, industrious, thrifty, American citizen and to have fun through the game of Scouting. He himself must be a citizen at least 21 years of age. Following a careful appraisal of him and his character, he is commissioned by the National Council.

Every Scout, therefore, will want to show his appreciation of his Scoutmaster by giving him 100% teamwork.

One of the things the Scoutmaster (or someone designated by him) will want to discuss with each

Scout is "In what are you especially interested?"—and then helping direct the Scout to the nearest library to find what they have for him on that subject.

2. The Assistant Scoutmasters—(who must be at least 18 years of age) have as their task to help the Scoutmaster and should counsel with him about personal problems and interests — there are many things in Scouting activities with which the Assistant Scoutmasters can help. There are always ways in which each Scout can help him, as well. The Scoutmaster and Assistant Scoutmaster are commissioned by the National Council.

3. The Junior Assistant Scoutmasters—are First Class Scouts, 16 years of age and over, who on the recommendation of their Scoutmaster may be appointed by the Local Council, which issues to them "warrants." The J.A.S.M. has an opportunity to help the Scoutmaster and assistants and gain valuable training in so doing.

Scout Offices In The Troop

In addition to the Junior Assistant Scoutmaster who is an older Scout going on into Troop leadership, there are a number of Troop officers for Scouts. Indeed, the Scout idea of "Learning by Doing" means for Scouts to carry as many Troop responsibilities as possible.

1. The Senior Patrol Leader—is a First Class Scout who because of experience and ability is selected to help the other Patrol Leaders and the Scoutmasters as requested by the Scoutmaster. Full particulars about Patrol Leaders are in the "Handbook for Patrol Leaders."

2. The Patrol Leaders—as already suggested in the pages on the Patrol, are elected to head up the little democracies (Patrols) into which a Troop is divided.

3. The Patrol Leaders' Council—is the planning and operating staff of the Scoutmaster. In the most successful Troops they meet weekly with the Scoutmaster and his Assistants to "plan" for the next meeting. Such sessions are often held either before or after the regular Troop meetings. The leader of each Patrol by discussing proposed program plans with his Patrol, can give his Patrol a chance to suggest plans for program items.

The success of a Troop is very closely related to team work in

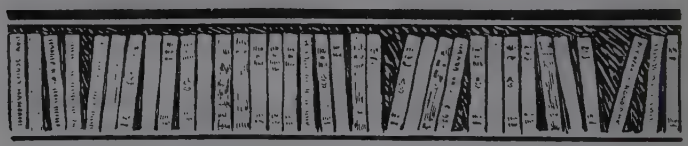
1. Making a good plan. 2. Working that Plan.

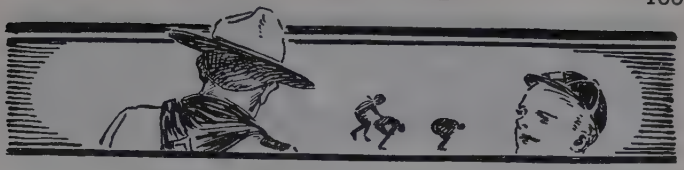
4. The Troop Scribe—is the secretary of the Troop, elected or detailed to keep the records under the direction of the Scoutmaster. He makes out reports and forwards them to the Local or National Offices and various papers with items of Troop news. He keeps the record of attendance and dues, if any.

5. The Troop Bugler—may be selected or one of its members urged to master the various Scout Bugle Calls.

6. The Troop Cheer Leader—may be appointed—or a song leader—or other leaders with special skills.

7. The Troop Librarian—may be any Scout in the Troop, perhaps one of the older Scouts. The Scoutmaster, under this program, may assign to him the care of and responsibility for the Troop Library, for national, local and individual reading lists of available books





on the various subjects explored by various Scouts, as well as serve as an aide for the Scoutmaster in arranging guidance conferences between Scouts and Scoutmaster—in making appointments for each Scout thereafter with available librarians and sources of books—and serving as followup man to encourage and aid each Scout to pursue his interests and tap the reading resources.

8. Den Chief—is a Scout position of leadership in a Cub Pack. It offers a Scout excellent opportunities to gain experience in coaching younger boys. For the Scout who has a handicraft hobby or who enjoys coaching younger fellows in games, puzzles, tricks or in Cub Achievements—here's a great chance. Ask the Scoutmaster or the Cubmaster. Assistant Cubmasters are needed also.

Prompt Troop Registration

Once each year every Troop renews its registration with the Movement, as provided in the regulations under the Charter from the Congress of the United States. Here each Scout can be a real help by registering promptly.

This registration of fifty cents a year helps carry Scouting to other fellows in addition to entitling each Scout to his pocket Membership Certificate with the signature of the President of the United States upon it. This is one's official evidence of membership and of the right to wear the Scout Uniform and Badges and take part in Scouting activities.

CHAPTER X

SOME SPECIAL SCOUTING OPPORTUNITIES

In this chapter are grouped a number of special provisions for meeting unusual conditions, as well as an outline of the full program opportunities of the Movement which enable a boy to come in as a Cub at 9, become a Scout at 12, A Senior Scout after 15, and a Rover Scout after 18.

Scouting For Country Boys

Throughout this Handbook as well as in the Merit Badge opportunities, there is much material related to rural life and of value alike to city and rural boys. Forty million people live on farms. In addition, thirty-six million others make their living in some phase of agriculture — in the professions, sciences, industries, businesses and as special leaders. We all look to the soil for food — so everyone has an interest in the farm.

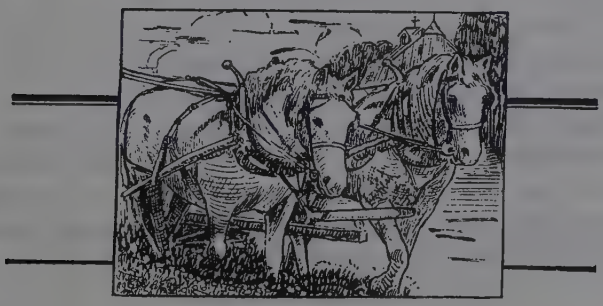
Almost any boy, whether he lives in the open country, village, or rural town, will want to be a Scout, and, fortunately, the scope of the Boy Scouts of America is such that he may become a Scout either in the city or the open country.

Scouting is being offered to country boys by three methods—in regular Troops, in Neighborhood Patrols, or as Lone Scouts. The Troop has been described in Chapter IX.

The Neighborhood Patrol is designed to meet the needs of small groups of boys who desire to do Scout work and enjoy the advantages of Scout training but who, for one reason or another cannot at the time join a regular Troop. The services of an adult Scoutmaster, recommended by at least three fathers in the community must be secured. The Neighborhood Patrol in the community consists of not less than two nor more than eight boys. The Patrol may later become part of an organized Troop, if circumstances permit.

It may meet in homes of Scouts, in grange halls, local churches or other convenient meeting rooms. This Patrol will not be chartered but each boy will pay the regular 50 cent registration fee. Its special characteristic is the fact that it is particularly sponsored by the homes instead, as in the case of a standard Troop, an institution.

The Scoutmaster will plan activities for evening work, week-end hikes, and camping programs for farm boys so as to accommodate their needs, interests, and respect in a Scout-like way the wishes of parents in their need for help in chores and farm operations.



A Scout's opportunity in "Preparedness" and "Daily Good Turn" as affecting not only human beings but farm animals, plants, soil, machinery, and farm buildings will prove daily challenges to real Scouts.

Scouts who know of farm boys who are not Scouts, can write, phone, or see them and tell them how to form a Patrol and secure a Scoutmaster.

The Lone Scout Method of Scouting for farm boys enables a farm boy to join as a Lone Scout without even waiting for other boys to form the group. He sends to Boy Scouts of America, Rural Scouting, Service, 2 Park Avenue, New York, N. Y., or calls up a nearby Scout Council Office, and asks for an application blank.

The Full Scouting Program

Scouting has proved so attractive that the National Council has developed Cubbing and Senior Scouting for younger and older boys, thus offering a series of programs which follow each other somewhat like Elementary School, Junior High, Senior High School and College.

This starts with Cubbing——goes into Scouting in the Troop and Patrol or Lone Scouting—then comes Sea Scouting, older boy Scouting with the call of the sea in it—then Explorer Scouting, or Senior Patrols, older boy Scouting with the flavor of the woods—then comes Rovering and after 21, Scouts become Citizen Alumni.

This family of progressing programs in one sponsoring institution is the "Group" system. As Lord Baden-Powell has said, "Where there is a Troop, a Pack can be developed. So any one program is 'lonesome' until the full 'group' is available for the young men involved," as they grow and develop.

THE "GROUP"

- Cubbing (9-11) —Home-centered Program In Packs, Neighborhood Dens or as a Lone Cub
- Scouting in the Troop (12+) or in a Neighborhood Patrol or as a Lone Scout
- Senior Scouting
  - Senior Patrols (15+) or Explorer Scouting (15+) — Scouting carried on to older years with the flavor of the woods and mountains.
  - or Sea Scouting (15+) — Scouting carried on to older years with the flavor of the sea and boats.
  - Rovering (18+) — "A fellowship of service and the open air."
  - Alumni (21+) — The Alumni of the Troop.

1. *Cubbing*—comes first with a home-centered program for 9, 10, and 11-year-old boys. It is kept entirely different from Scouting and offers the able Scout chances to lead these younger fellows as their "Den Chief." This should be talked over with Scoutmaster.

2. *The Scout Troop (City or Rural) or The Neighborhood Patrol, District Tribes, or The Lone Scout* stand open to boys who have reached 12 years of age. Those are the opportunities which this "Handbook for Boys" describes. In addition to the "Handbook for Scoutmasters," there is a special book for Rural Leaders.

3. *Senior Scouting* is open to all Scouts fifteen years of age and over. The Senior Scout may wear the spe-

cial membership strip over the right pocket of his Scout shirt — "Senior Scout B.S.A." He may then carry on in his Troop as before or may become a Sea Scout or an Explorer Scout, or after 18, a Rover Scout. These opportunities are more fully described in Chapter XX. There is also a special handbook for Senior Scouts, "Adventuring for Senior Scouts" with plans and suggestions for advanced activities, also a special Sea Scout Manual.

4. *Veteran Scouts* (5 Years and more), *Scout Alumni* and *Associate Scouts*—are discussed in Chapter XXI.

5. *Leadership in Scouting* (beyond Patrol Leader) —includes Junior Assistant Scoutmaster, Assistant Scoutmaster and Scoutmaster—also Lone Scout Friend and Counselor. These progressive chances to serve as leader are also set forth in Chapter XXI.

First and Second Achievement Scout Badges

Achievement Scouts (Scouting For Special Cases)

Scouts who are prevented by apparently permanent physical disability from passing all the requirements for Tenderfoot, Second and First Class Scouts are given an opportunity to progress farther in Scout rank. These boys are known as Achievement Scouts. The Scout passes all the required Tenderfoot, Second and First Class Requirements of which he is capable, and devises and passess some tests within his physical capacity in place of the prescribed requirements he is unable to

meet, as evidence of his Scout spirit and eagerness to develop his ability to the fullest. A duly registered physician shall certify to the permanency of the disability and the Scout's inability to pass the required tests during the period of his life as a Scout.

Scouts who qualify in all possible Second Class Requirements receive Achievement Certificate No. 1. They will then be eligible to qualify for Certificate No. 2 under the same conditions. They may also qualify for any five of the Merit Badge subjects open to Second Class Scouts. This is also awarded to Scouts who have previously qualified as Second Class Scouts but who because of disability cannot pass the prescribed First Class Requirements. Scouts who win Certificate and Badge No. 2 are then eligible to qualify for any Merit Badge within their physical capacity. They may not be awarded Star, Life or Eagle rank but may be members of the Veteran Scout Association.

The Scout Organizer Award

The Scout Organizer award is made in recognition of organization and leadership ability to any registered Scout in good standing on the following basis:

1. For each new registered member of the Boy Scouts of America, Cub or Scout or Scouter secured.....1 point

2. For the organization as a result of his personal efforts of a Pack or Scout Unit of five or more members (Neighborhood Patrol, Tribe, Sea Scout Ship or Troop), according to the procedure authorized by the Boy Scouts of America 10 points

The title "Scout Organizer" (S.O.) and the Scout Organizer emblem will be awarded to any Scout who qualifies for 15 points on the above basis. Five points under Requirement No. 1 may be added to the 10 points under Requirement No. 2. Fifteen new members not organized into a Scout unit also count as 15 points.

The award is for Scouts only, not Scouters.

The Gold Quill

The Gold Quill is an award made to registered Scouts in good standing for achievement in Journalism in recognition of having earned a total of one thousand credit points, as evidenced by clippings submitted at the time application for the award is made. Clippings must indicate clearly date of publication, and name and post office address of publication in which material appeared. All work submitted must be the personal work of the applicant.

The Scout must be registered and in good standing to be eligible for points and for the Gold Quill award. Application for the award shall be submitted to the Local Council, or, if not under Council, to the National Office.

1. For each 50 words of original script accepted and published in any of the following printed publications: Authorized Scout publications; chartered Boy Scout papers; cooperating Scout publications; local school publications; farm, club, house organ or trade publications; publications of agencies promoting Boy Scout work..... 5 points

2. Poetry: For each 50 words of original poetry published on the basis stated in No. 1.....10 points

3. Cartoons and Drawings: For each cartoon or drawing published on the basis stated in No. 1.....10 to 150 points

4. Original Photographs: For each original photograph published on the basis stated in No. 1.....10 to 100 points

5. Magazine cover design or drawing reproduced in one color) .....100 points
Magazine cover design or drawing (reproduced in two colors) .....200 points
Magazine cover design or drawing (more than two colors) .....300 points
Published on the basis stated in No. 1

6. Headlines and attractive lead lines, published on the basis stated in No. 1.....5 to 50 points

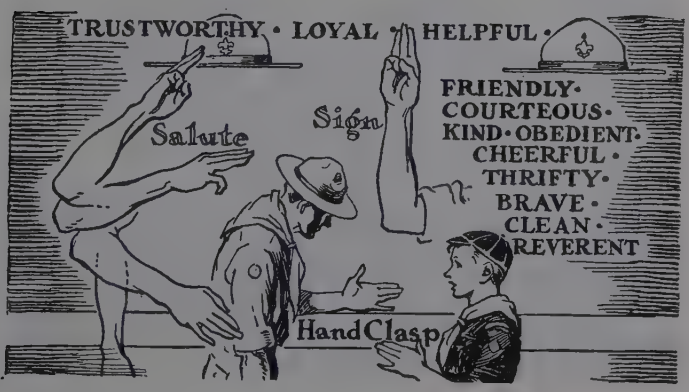
In awarding these points, consideration will be

given to the variety of the subjects treated and the quality of the subject matter, as well as the literary style of the writing or artistic merit of the drawings or photographs. To merit the award of the Gold Quill, contributions should indicate interest in a variety of subjects, such as straight news, club or society meetings, lectures, sermons or political addresses, theatrical performances, subjects or events to be suggested by Counselors, editorials, publicity articles, features, or human interest stories.

Such items must be published in a least five different issues of one or more publications.

Training a Tenderfoot

Every First Class Scout should, as a Good Turn project, try to recruit and train another boy. There is no award for this, but the satisfaction that comes to a Scout when he brings another boy into Scouting and passes on to him some of the things he has learned, the fun, the games, the worth while service, is the biggest kind of reward. Scouting does help build character and train for citizenship. Helping another boy to have Scouting, may easily be changing his entire life. It's



Honor Medals For Saving Life

A Gold Medal may be awarded to a registered Scout or, in exceptional cases, to a Commissioned Officer, where the evidence presented to the National Court of Honor in accordance with prescribed regulations, shows that he actually saved life under circumstances which indicate unusual bravery and heroism, the practical results of Scout training, and the risk of his own life. Should a high degree of Scout training lessen personal risk, the nominee is not disqualified, but on the contrary, the Court will give especial recognition to demonstrated skill in life saving methods and Scout resourcefulness.

The Honor Medal may be awarded with crossed palms in exceptional cases, where in the judgment of the National Court of Honor, both heroism and exceptional achievement in the practice of Scout principles and training are shown.

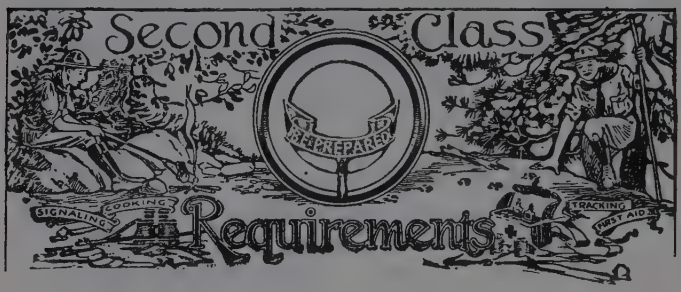
It shall be wholly within the discretion of the National Court of Honor to determine from the evidence presented whether or not an Honor Medal shall be awarded, in accordance with the prescribed conditions; and when in their judgment the evidence does not merit the award of a Medal, a Certificate for Heroism may be issued by the Boy Scouts of America.

In no case, however, shall a Medal be awarded where it appears that the risk involved, was merely in the performance of duty or the meeting of an obligation because of responsibility to supervise and give leadership to the person whose life was saved.

All cases involving the consideration of the award of Honor Medals shall be presented to the National Court of Honor on prescribed blanks, and it shall be within the discretion of the National Court of Honor to require further evidence or personal investigation and report before reaching a decision.

THE SECOND CLASS SCOUT REQUIREMENTS

PART III

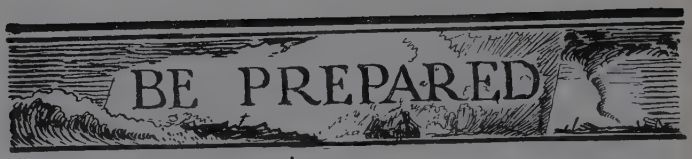


1. Have at least one month's service as a Tenderfoot and know how and when to wear the Scout Uniform.

2. Show what to do, including proper dressing and binder where necessary for, cut on finger; knee deeply scraped and bleeding; cut on forearm; bleeding nose; blister on heel; severe scald from hot liquid or steam; black eye; fainting; shock; blow in pit of stomach; apparent death from inhaling gas; drowning or electric shock. Tell what should and what should not be done for: pimple on face; earache; splinter under finger nail; cinder in eye; sunburn. Tell danger of taking a physic for pain or soreness in region of stomach without first consulting a physician.

3. Elementary signaling: know the alphabet of the Semaphore Code; or the General Service (International Morse) Code; or the elementary signs of the Indian Sign Language Code; or the letters of the Manual Alphabet for the Deaf, either with one or two hands.

4. Track half a mile in 25 minutes or if in town describe satisfactorily the contents of one store window out of 4 observed for 1 minute each.
5. Go a mile in 12 minutes at Scout's pace about 50 steps running and 50 walking, alternately; or lay out, measure by the stride method and stake a four acre tract of land.
6. Use properly knife and hatchet.
7. Prove ability to build a fire in the open, using not more than two matches, care for and put it out.
8. Cook a quarter of a pound of meat and two potatoes in the open, without any cooking utensils.
9. Earn and deposit at least one dollar in a public bank or other savings institution (premiums paid on life insurance are accepted, if earned); or earn, own and raise some farm animal, or earn and contribute at least one dollar or the equivalent to the family budget or to welfare work in the community.
10. Know the sixteen principal points of the compass.
11. Demonstrate his practice of at least five rules of safety at home, or work, or school, or on the street, or road, or farm.
12. Furnish satisfactory evidence that he has put into practice in his daily life the principles of the Scout Oath and Law.



CHAPTER XI

HOW TO BECOME A SECOND CLASS SCOUT

These requirements have been put in this form to make them easily available for the Scout to master them one at a time. They are not like school lessons to be learned, they are more like skill which once learned is used all the time—like a swimmer who has learned to handle himself in the water and now enjoys it frequently, or like a pilot who has mastered the handling of an airplane and enjoys it frequently.

"At least one month's service as a Tenderfoot and know how and when to wear the Scout Uniform."

From time to time, the Scout will want to refer to pages 49 and 50 and to the Color Section for how and when to wear the Scout Uniform.

During this month of active Scouting the wide-awake Tenderfoot will be getting ready to show to his Scoutmaster, the skills he has been mastering. This will

open to the Scout the rank of Second Class Scout—at which time he may meet his first experience in the Merit Badge subjects. These are especially for First Class Scouts but the Second Class Scout may choose five from a special list.

One of the big things in this month's service is that the Scout shall make progress in his understanding the Scout Ideals and in his efforts to live them, while actively helping in Troop and Patrol. Every day brings chances to do Good Turns and the alert Scout is watching for these chances—for there are many things a boy can do as a young citizen without waiting until he is 21 years old. Every day offers him chances to try to be more *trustworthy, loyal, helpful, friendly, courteous, kind, obedient, cheerful, thrifty, brave, clean* and *reverent* than he was a month before.

The Tenderfoot Scout needs to think through his own four great duties as a Scout and as a man and citizen.

The Four Great Scout Duties

"On my honor, I will do my best—
To do my duty to God and my country, and to obey the Scout Law;
To help other people at all times;
To keep myself physically strong, mentally awake and morally straight."

Our Scout Oath is a very clear statement of good citizenship. In it are the Four Great Duties of Life—I. Duty to God; II. Duty to Country; III. Duty to others; IV. Duty to self.

Duties are the foundation of all fair dealing. Every privilege in the world rests upon an equal responsibility. For everything we receive, there are things we must give.

We have the privilege of life—what is our duty as to its use? We have the privilege of citizenship in

these United States—what obligation goes with that? We have friends—what duty does that place upon us? We have our own talents—what obligation do they carry for their development and use?

As we "try to do our best" to live this Scout Oath, let us think through these big duties:

I. Duty to God

What is a Boy Scout's duty to God? What does a Boy Scout owe to the Infinite Creator of the Universe, the Source of life itself? The Church is the divinely appointed agency through which men are helped to keep close to God, in harmony of spirit. What is a Boy Scout's duty to his church?

The Scout Movement firmly insists that every man (and every boy), to come into his largest self and largest usefulness, must have an active part in things religious and spiritual. Belief in God? Of course. Obedience to His basic Ten Commandments and His larger command to brotherhood? Of course—but more than these, the real man keeps himself in conscious harmony with God and with God's other creatures, his fellow men AND in active participation with the Church.

In doing this, Scouts extend to every one of the other faiths, the same courtesy and consideration and respect for the other man's sacred things, that the Scout expects for his own. That is the spirit of Scouting in religiously-free America. "A Scout is reverent."

II. Duty to Country

What is a Boy Scout's duty to his America? What does he owe to the land which gives him free education, things to enjoy and do and also the chance to be what he wants to be?

To obey her laws? Yes. To respect her institutions? Yes—but more, as willingly to live for America as thousands of patriots have been ready to die for America. To die for one's country calls for supreme courage—but to live aright, to work, to produce, to help, to save, to obey the nation's laws, to be trustworthy, loyal, helpful, friendly, courteous, kind, obedient, cheerful, thrifty, brave, clean and reverent day after day in little things calls for as much courage spread over longer time—but that is good citizenship in a Democracy.

III. Duty to Others

What is a Boy Scout's duty to other people? What do they have a right to expect of a Scout

That he shall be friendly? Yes—all good citizens expect that from each other. That he shall be fair? Yes, of course—but more than that people know that the Scout promise to do a Good Turn Daily means that, like the ancient knight, the Scout helps others as he would want them to help him — but does it with no thought of return—just for the pleasure of doing it as a good citizen.

IV. Duty to Self

What is a Boy Scout's duty to himself? What does he owe to the immortal personality which he is?

He needs to grow—in stature, in strength, in knowledge and wisdom, in favor with God and man — to grow into greater value and usefulness and skill. He will be alert to grasp opportunities for Scout advancement, for Merit Badge explorations, for outreach through reading. The last words of the Scout Oath clearly point to a balanced duty to self—"Keep myself physically strong, mentally awake, and morally straight."

Only when he does that, can he have the full measure of fun, and happiness, and joy from living.

Requirement No. 2 First Aid

"Show what to do, including proper dressing and binder where necessary for:

1. Cut on finger.
2. Knee deeply scraped and bleeding.
3. Cut on forearm.
4. Bleeding nose.
5. Blister on heel.
6. Severe scald from hot liquid or steam.
7. Black eye.
8. Fainting.
9. Shock.
10. Blow in pit of stomach, apparent death

from inhaling gas, drowning or electric shock.

Tell what should and what should not be done for:

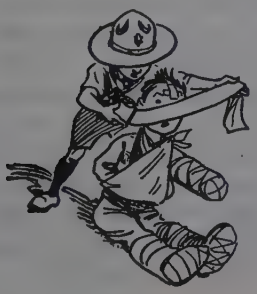
11. Pimple on face.
12. Earache.
13. Splinter under finger nail.
14. Cinder in eye.
15. Sunburn.
16. Tell danger of taking a physic for pain or soreness in region of stomach without first consulting a physician."

FIRST AID FOR SECOND CLASS SCOUTS

Just What Does First Aid Mean?—First Aid is emergency treatment given before the doctor arrives to people who are badly hurt or become sick and it is also the immediate care of slight injuries. It may be given by you to some other person, or to yourself.

Examples:

Ten-year-old Ben Bent is pulled out of deep water, is unconscious and not breathing; you send a boy for a doctor and at the same time give artificial respiration. When the doctor comes. Ben is breathing and the doctor takes charge:—That is First Aid for others.



A cat scratches me on the wrist; I go to the First Aid box, put antiseptic over and around the wound, cover it with a piece of sterile gauze dressing from a sealed package, fasten it in place with adhesive tape, and tell mother about it:—"That is First Aid for myself.

Why A Scout Requirement?—More than a million Americans each year are seriously enough injured to need medical care—automobile and train wrecks, drownings, falls, burns, gun shot wounds—a million chances for the best of Good Turns.

Dressing And Caring Of Wounds

A wound is an opening, made in the body surface, through which the blood may escape, such as a cut from a knife or a knee scraped in falling.

Wounds are the most common of all injuries, and the dangers are: first: of the entry of germs, which might cause infection sometimes called blood poisoning; second, of the loss of such a large quantity of blood that death results.

All wounds are dangerous. A prick from a pin may be slower in its effect but just as serious in the end as a cut which severs an artery. Be equally careful of all wounds, for delay or neglect may prove fatal.

The most dangerous bleeding is the spurt of blood from an artery. There are about five quarts of blood which the heart forces out of the body very quickly, if one of the main pipe lines, "an artery," is cut.

Such an accident needs immediate attention. Speed! No delay! (Described in First Class—First Aid.)

Neglect—Grown up folks, who ought to know better, often neglect small cuts and scratches, just let them alone, and say, "I have good blood and it will heal all right." Sometimes it does "heal all right," but if a few husky pus germs happen to get into that wound—then double trouble!

One of the best of Good Turns that you can do is to get the members of your family to take care of such little injuries when they happen, thus helping Nature's great healing power with good common sense and cleanliness.

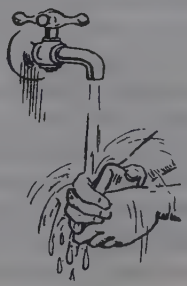
Antiseptics—Several of the many liquid antiseptics, sold for the purpose of destroying germs and preventing infection are quite effective, but some are of little value. While no antiseptic is perfect, nor can its use give positive assurance of protection against infection, they are undoubtedly of value along with sterile dressings in assisting the natural resources of the body in fighting infection. Antiseptics should not be used in the eye, in the mouth, or on burns. One of the best of the common antiseptics is the U.S.P. mild tincture of iodine.

First Aid Treatment Of Wounds — (1) Cut On Finger; (2) Knee Deeply Scraped And Bleeding; (3) Cut on Forearm

When a finger is cut, let the wound bleed until it cleans itself of any dirt that might have been forced into the opening by the cutting edge.

Apply a little antiseptic in and around the wound and when the antiseptic is dry, cover it with a sterile gauze dressing from a sealed package and bind that in place with a bandage or with strips of adhesive tape.

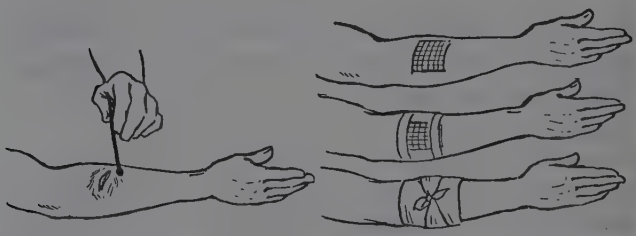
Bandages are not dressings and should not be used for that purpose because they are not sterile even though they may look clean.



Wash The Hands—Before attempting to give first aid for wounds, WASH BOTH HANDS CAREFULLY WITH SOAP if it is possible to do so. If it isn't possible, be doubly careful in handling the dressing so that fingers do not come in contact with the part that covers the wound.

Dressing For Wounds—When, or if, a wound must be covered to protect it from dirt, that cover must be sterile—germ free.

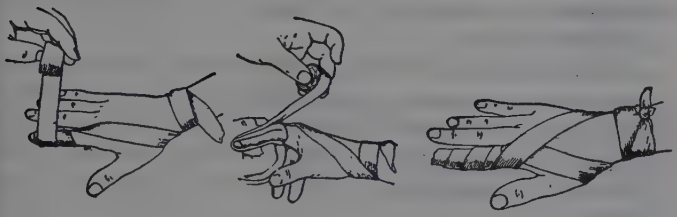
Cotton gauze cloth sterilized in sealed packages is the proper thing to use. If no sterile gauze is at hand —take the cleanest piece of white cloth and boil it for five minutes or hold it over a fire until it turns brown. Always apply antiseptic in and around the wound before putting on such a dressing.



Apply antiseptic. Cover with sterile dressing. Hold in place with adhesive tape or bandage.

Puncture Wounds And Tetanus—Puncture wounds are especially dangerous. They do not bleed freely and are hard to clean. Tetanus or lock-jaw is more likely to develop from these. This disease is caused by a germ found wherever horse manure is spread, in street dirt, gardens, yards, and around barns. The first aid for puncture wounds is the same as for other wounds. A person with a puncture wound should always be taken to a physician who can give tetanus antitoxin, if he thinks it is needed to prevent the disease from developing. Gunshot and powder wounds from fire crackers and blank cartridges and wounds caused by knives, large splinters, etc., are often followed by tetanus infections unless promptly

treated because of the likelihood of germs on the skin or clothing being forced into the wound.



How to apply roller bandage over a dressing for a cut finger.

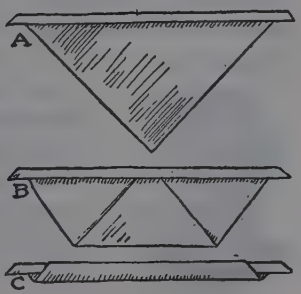
Bandages

Bandages are used for the following purposes:

1. To hold dressings or compresses in place
2. To keep splints in place
3. To control bleeding by pressure
4. As a sling to support a broken or sprained arm

A bandage is never used next to a wound, but is used over the dressing to bind it in place.

Triangular Bandages—It may be made by taking a square piece of cloth, folding it diagonally, and cutting along the fold, thus making two triangular bandages. A 36-inch square is recommended for Scouts. The Scout Neckerchief serves very well and may be used folded instead of cutting it in two.



The triangular bandage is used open and also folded as a cravat.

Adhesive Tape Bandages — Adhesive tape is cloth coated on one side with an adhesive which causes it to stick to the skin or to itself.

It is used in First Aid for securing wound dressings and splints in place, and by experts to support sprains and broken ribs.

A combination of dressing and adhesive, which comes in a sealed package, is very handy for small wounds, particularly finger cuts. Always apply an antiseptic to the wound before putting on this dressing, or any kind of dressing. Adhesive tape is never placed directly on a wound.

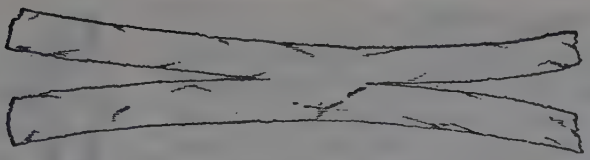
Roller Bandages — Roller bandages are strips of bleached or unbleached cotton cloth, one or more inches in width, rolled in paper wrappers.

Roller bandage is not recommended for First Aid work except for fingers or toes. However, it is often all that is available. Always place sterile compress over a wound before applying any bandage.

Using The Triangular Bandage—The great advantage of the triangular bandage is the fact that a square or three cornered piece of cloth is easy to secure, while roller bandages are not. A Scout in Uniform has his Neckerchief ready at hand for instant use.

Another advantage is the simplicity of its use. To use a roller bandage skillfully, one must devote hours to practice.

A roller bandage or adhesive tape is best for holding a dressing in place on small wounds of the fingers and toes, but for the larger injuries and for slings and splints, the triangle is superior.



Four-tail bandage may be torn from an old sheet

Always—The Sterile Dressing First!!! — *Again and again, and always, remember* that a sterile dressing goes next to the wound—and that the bandage or adhesive tape is only the binder used to hold the dressing in place.

4. Bleeding Nose

Bleeding from the nose is usually from a small vein in the middle partition of the nose. Usually it is not serious, but may become so occasionally. Slight nose bleed requires no treatment.

When more severe, the patient should sit with the head slightly back. Loosen the collar. Do not blow the nose, breathe through the mouth. Apply cold to the back of the neck and over the nose by means of a cloth wrung out in cold water, or use pieces of ice. A roll of gauze or paper placed under the upper lip, with firm pressure applied to the outside of the lip, also helps. Pinching the nostrils together will apply direct pressure over the bleeding point and usually cause the blood to clot. Pressure should continue for five minutes or more.

If bleeding still continues after some minutes, a physician should be consulted.

5. Blister On Heel

It is difficult to keep feet clean even with a daily bath and change of socks. Because the feet are the hardest part of the body to keep clean, they are likely places for infections to develop.

NEVER NEGLECT A SKIN BREAK OR BLISTER ON THE FOOT!

Blisters should not be opened except by a doctor.

One of the greatest of America's many splendid industrial surgeons has this to say on the subject: "Blister on heel—cleanse with soap and water, and see the doctor. Do not pick blisters on heel, fingers or hand."

And another who is outstanding in the field of surgery and first aid, says: "Do not open. Wash with soap and water. To protect blister from being broken, cover, if small, with a strip of adhesive tape to prevent chafing. If large, apply a piece of sterile gauze and hold in place with adhesive tape. By all means have it cared for by a doctor."

If the blister has been broken, treat as any wound with antiseptic and a sterile dressing, and bring it to the attention of a doctor. Those small foot injuries are really *dangerous* and must not be neglected.

6. Burns

Small, mild burns that do not break the skin may be treated with any good burn ointment or a paste made of baking soda and water, spread first on a piece of sterilized gauze.

— BUT — Second and third degree burns, where the skin and flesh have been blistered or charred, *must receive medical attention at once.* Nothing should be ap-

plied that will be difficult to remove. *Greasy burn ointments must not be used.* A 5 per cent tannic acid solution, or tannic acid jelly, or picric acid gauze is best. If neither of these is on hand, a sterile gauze dressing of epsom salts or baking soda mixed in water should be used. Dressings must be kept wet with boiled water (cooled) applied with a spoon or cup that has been boiled with the water until the doctor has made his examination and given treatment.

Never put cotton batting on a burn, as it will stick and be almost impossible to remove.

The great danger resulting from burns in which the skin has been broken or burned away is from infection. It is for this reason that the skin should never be intentionally broken in the treatment of a blister. Cut away all cloth up to the wound, but do not attempt to remove the burnt material directly covering a burn. Antiseptics should never be applied to burns.

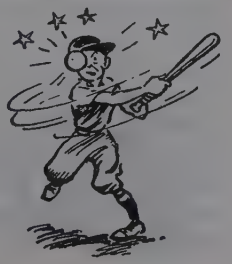
Treat burns from chemicals by washing off as quickly as possible with large quantities of water, more water and still more water.

7. Black Eye

If one is struck near the eye, it is likely to discolor unless one gets busy right away. After the eye has started to discolor, there isn't much to do about it except to wait for nature slowly to do its work—and it is slow.

If the skin isn't broken, apply something cold at once—a piece of ice bound up in a cloth, or a cloth wrung out in cold water—in fact, anything that is cold and clean and soft.

Keep the eye closed while using the treatment.



Years ago people used leeches on black eyes, but this was a very dangerous thing to do because of the great possibility of infection and severe bleeding. The eye is very close to the brain, and an infected wound there is *very serious.*

If there is a wound near the eye as a result of the blow, or if the eyeball shows evidence of injury, see the doctor at once.

8. Fainting

Fainting may be caused by pain, too much heat in a crowded room, fright, or even sudden good or bad news.

The strange, weak feeling and then unconsciousness is caused by the blood temporarily leaving the brain.

Unless the fainting person is injured in falling, the condition is seldom serious.

Treatment: Place patient on back with head low; loosen clothing; get plenty of ventilation by opening windows or fanning, keep crowd back; smelling salts, aromatic ammonia may be held under the nostrils (but not entirely stopping the passage of air). Rub arms and legs, always toward the heart. Be sure to keep patient warm.

Be in no hurry to get the patient on his feet.

But if unconsciousness lasts very long—several minutes—treat for shock and send for a doctor.

Shock position—Head low, feet high

If one feels faint, one should sit down or lie down at once, with the head as low as possible, or if standing in a crowded place and cannot sit down, reach one hand across the body at the belt line, seize the belt, pull in hard with the arm, and grunt.

9. Shock

Shock is a sudden let-down or depression of the nervous system—the senses are dulled, the heart beat is weak but fast, the breathing is irregular, the face and hands become very pale and covered with cold sweat —the patient may be unconscious.

Severe shock is a very serious condition and requires a doctor's attention at once.

Shock is a condition brought about by violent injury or strong emotions. It is dangerous to a great degree and many people die as a result of it.

Look for shock in ALL First Aid cases. It is present in all serious injuries and greatly increased by severe bleeding and pain. The symptoms are pale face, cold clammy skin, rapid weak pulse, shallow breathing and sometimes by nausea or vomiting.

First Aid—Lay patient on back, head low, loosen clothing about neck, chest, and abdomen. Keep warm with blankets, hot water bottles, hot bricks or heated stones, being careful not to burn the person. If he can swallow, give him hot, strong, black coffee (sip it first to make sure it is not too hot), hot tea, or half teaspoonful aromatic spirits of ammonia in a third of a

glass of water. Never attempt to pour liquid down the throat of an unconscious person who is unable to swallow, for it will cause choking and greater shock.

10. Artificial Respiration

Certain accidents may cause breathing to stop before the heart stops beating. There is a good chance to save the patient's life if artificial respiration is applied immediately.

These accidents are; apparent drowning, being overcome by gas,* electric shock,† being buried in a cave-in, hanging, and a blow in the pit of the stomach (solar plexus) or back of neck.

Figure 1

Figure 2

*A gas victim cannot be worked on in a gas filled room, but must be carried or dragged into the air or the rescuer should open or break windows or doors to give cross ventilation. He should call loudly for help and not attempt to work on victim until room is clear of gas or help arrives; otherwise, the rescuer may be overcome, without being able to give any assistance.

†Unless sure of what you are doing, do not attempt rescue of a victim from a live conductor; you may only double the work for someone else. If you do attempt it, act with all possible speed consistent with care that no mistakes are made. A slip may result in a more dangerous contact between victim and conductor, or cause conductor to swing around endangering all those near by. Victim and conductor may be separated by looping rope or cloth around one, and pulling them apart, pushing or lifting with a dry stick, or a thick pad of material folded up may be used as a glove. Conductor may sometimes be cut with an axe or a switch may be opened.

First Aid—Send for a doctor, stimulants and blankets. *Go to work instantly, right where you are!*

Turn patient face down, one arm extended directly overhead, the other arm bent at elbow and with face turned outward and resting on hand, so that nose and mouth are out of the dirt. Kneel, straddling one leg in position shown in Fig. 1. Place palms of hands on small of back, the little finger just touching lowest rib, and with the thumb and fingers in a natural position. (See Fig. 1).

With arms held straight, swing forward slowly so that the weight of your body is gradually brought to bear upon the patient for two seconds. Your shoulders should be directly back of your hands at end of forward spring, your elbows straight. Immediately swing backward and remove the hands. (Fig. 2). After two seconds, swing forward again.

Repeat twelve to fifteen times a minute the double movement of compression and release, a complete respiration in five seconds. Continue artificial respiration without interruption until natural breathing is restored, if necessary, two hours or longer, or until a physician declares patient dead. A brief return of natural respiration is not a certain justification for stopping resuscitation. Patient must be watched and if natural breathing stops, artificial respiration should be resumed at once.

Other Helps—While one works, helpers should send for a doctor and provide hot bottles or bricks (wrapped in cloth or paper to prevent burning the patient), and tea or coffee for stimulant. When one needs rest, let one of the helpers take over. One may clean patient's mouth, while others may loosen patient's clothing and rub his body and limbs towards the heart to stimulate circulation. Covering and heated articles should be applied. (Be careful to avoid burning patient.)

Aromatic spirits of ammonia may be held beneath the patient's nose at frequent intervals.

Do not quit! Even if no immediate results are seen, do not give up until at least two hours' effort has been made.

When necessary to relieve the person giving artificial respiration do so without loss of the rhythm. The operator can shift quickly on his up stroke toward his outside knee and the relief operator get in position from the other side, make one or two pressures with him, then replacing without loss of a single pressure or disturbing the rhythm.

Reviving—When subject begins to breathe and can swallow, hot water, teaspoon of aromatic ammonia in ½ glass of water, tea, or coffee may be used as a stimulant. He should be well covered and surrounded with hot water bottles. Should he vomit turn his head to the side. Heart collapse or pneumonia often follow cases of suffocation, so don't allow patient to walk or otherwise exert himself. After such an experience, medical attention and care are necessary for a day or two.

11. Pimple On Face

Keep Fingers Away From Pimples—The squeezing of pesky pimples has caused a great many serious and fatal infections, particularly when the offending bump is close to the nose and to the brain. Doctors everywhere warn against this dangerous practice. Pimples don't look nice, but it is much safer in the end to let them alone entirely or to apply a little alcohol and let them dry up.

If you are constantly troubled by these irritating companions, the very best thing to do is to see the family doctor. Certainly don't take medicine to clear up your skin unless he prescribes it.

12. Earache

Ears—Only Two To A Head—Be Careful Of Them!—An earache may indicate a serious condition or it may result from a cold, from a too sudden change of altitude, or from a deep dive.

Treatment of ears should be GIVEN only by a doctor. They are too delicate to be worked on by anyone but an expert.

The only First Aid recommended, is heat or cold, a hot water bottle, salt pack, or a heated brick, wrapped in a sufficient amount of cover to prevent its burning the skin. One of these or an ice pack often gives relief when placed against the side of the head.

A foreign body in the ear will require the attention of a doctor—a First Aider should not attempt its removal.

13. Splinter Under Fingernail

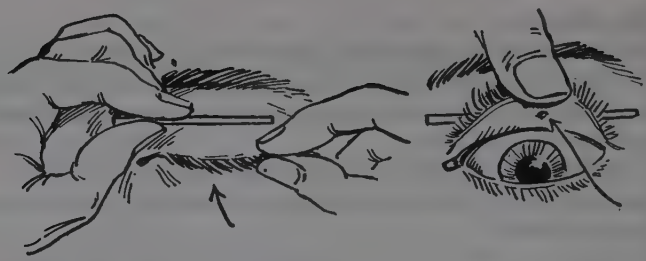
The seriousness of a splinter wound depends upon the amount of dirt that it carries through the skin. Splinters are never clean, and so any such wound should receive immediate attention.

A frequent place for splinters to enter is under the fingernails. These can often be removed with tweezers after the skin around the splinter has been thoroughly cleaned with some good antiseptic. If the splinter cannot be removed in this manner have a dcotor take it out.

If there is any reason to believe that it comes from lumber which may have been used around a barn or laid on the ground, then the doctor should be consulted because of the danger of tetanus (lock jaw).

14. Cinder In Eye—Careful

The eyes are precious organs and should not be irritated by the efforts of inexperienced First Aiders. If the object is imbedded in the eye ball, or is very difficult to



Method of lifting the eye lid

locate, a doctor should take care of it. Often objects may be washed from the eye by stimulating the flow of tears, by holding the eye open for a long time, or winking the eye rapidly for a second or two; if this doesn't work, then gently grasp the lashes of the upper lid and pull it out and down over the lower lid. This will stimulate the flow of tears also and often does the trick. Of course an irritated eye should not be rubbed.

A practiced First Aider can skillfully roll the upper lid back, up and over a match stick and remove the cinder or speck of dirt with the corner of a piece of gauze or of a clean handkerchief. Some First Aid kits contain castor oil, a drop of which placed in the eye will prevent irritation if the particle is rough.

If the simple measures just described do not dislodge the particle, do not attempt further manipulation. Apply a small amount of the eye ointment (boric eye ointment) from your First Aid kit, cover eye with a bandage compress and consult a physician. The bandage dressing will keep the lids closed and prevent any more injury to the eye. Castor oil may be used instead of the eye ointment.

15. Sunburn

Acquiring a healthy, outdoor color slowly will prevent suffering from sunburn. To do this, spend an in-

creasing length of time in the sun each day, beginning with about fifteen minutes of exposure.

A saturate solution of tannic acid will go far toward protecting the skin. Dark oils and greases such as carron oil, or brown grease paint or cocoa mixed with cold cream are frequently effective. Vinegar is a favorite with many people but no one of these is perfect. The wise thing to do is to "take it easy."

Sunburn is treated like any other burn, with burn ointment if the burn is not too bad. Never break blisters. In case of severe suffering, see a doctor at once.

16. Stomach Ache

Use no medicine! Keep laxatives away, if the stomach aches, for it may be caused by an inflamed condition of the appendix, which may be ruptured (broken) if internal medicine is taken to cause bowel movement. Because in so many instances stomach pain is a sign of appendicitis, the safest course to follow if the pain continues, is to call a doctor immediately.

In the meantime rest in bed, no food, no laxative, until he arrives.

What The Word Means

ABDOMEN—body cavity in which the stomach and other digestive organs, lie in front and below the ribs

ACID—sour, opposite of alkali, vinegar is an acid

ALKALI—opposite of acid, baking soda is an alkali

ANTIDOTE—a remedy for counteracting a poison and stopping its action

ANTISEPTIC—a substance which will prevent the growth of germs

ARTERY—one of a system of tubes or vessels which carry the blood away from the heart

ARTIFICIAL RESPIRATION—breathing caused by artificial methods

BINDER—something used to bind a dressing in place

BOWEL—intestine; ("gut")

CAPILLARY—minute blood vessel connecting artery with vein

CATHARTIC—a substance which, when taken by mouth, causes a movement of the bowels

COLLAPSE—extreme depression with failure of the circulation.

CRAVAT—a trianguular bandage folded lengthwise one, two or three times

DRESSING—a sterile covering used to protect a wound

FAINTING—a sensation of weakness, or unconsciousness caused by a lack of blood in the brain

FRACTURE—a broken bone

GAUZE—a very thin porous cloth, used as a wound dressing when sterilized.

GERM—a microscopic vegetable organism which has been demonstrated to be the cause of certain diseases

HEMORRHAGE—a leaking or spurting of blood from a wound

INFECTION—the growth of germs, frequently with the formation of pus in the tissues of the body

LACERATION—a torn wound

LAXATIVE—a substance used to stimulate bowel action

NAUSEA—"sick to the stomach"

PURGATIVE—a medicine which causes the bowels to move freely

RESUSCITATION—reviving by artificial means

SHOCK—a state of prostration following an injury and sometimes mental strain

SPRAIN—a wrenching of a joint, producing a stretching or laceration of the ligaments

STERILE—free of all germ life

STERILIZE—to make sterile, or free from live germs—usually done by heat—a process used to render dressings free from germs

STIMULANT—a remedy given to excite or increase the heart action

STOMACH—the sack which receives the food when swallowed and prepares it for digestion

STRAIN—excessive stretching—over-use of a part

SYMPTOM—indication of illness or injury. Examples—fever, pain, soreness

TETANUS—a specific infection commonly known as "lock-jaw"

TOURNIQUET—a device for compressing a blood vessel to stop or control the flow of blood

VENOM—poison in certain snakes, spiders and insects which makes their bite or sting injurious and sometimes fatal

VEIN—one of a system of tubes which carry the blood towards the heart

WOUND—a break in the body's surface

HANDLING FARM ANIMALS

1. Remember that farm animals depend upon their owners for their existence.

2. Contented animals render the most efficient service.

3. A sick or injured animal should be allowed to rest and should receive proper treatment until it has recovered.

4. When caring for animals or treating them, go about the work quietly, don't shout or get excited or

move so quickly as to startle them. Act and speak in a quiet, matter-of-fact manner that will allay fear and establish confidence.

5. Don't show fear when handling animals even if afraid.

6. Take reasonable precautions to avoid injury, as for instance, muzzle a strange dog before attempting to give it medicine, or treat a wound. If a horse shows a disposition to be dangerous, a twitch may be used.

7. In applying means of restraint don't cause unnecessary pain. It is the last twist of the twitch that hurts most.

8. If a sick or injured animal insists on lying down, it should not be forced to arise or walk.

9. Be cautious in handling bulls—They should always be considered dangerous.

U. S. Bureau of Animal Industry—There are many animal parasites and many contagious diseases to which farm animals may be exposed. The Scout is urged to secure the proper pamphlets from the U. S. Bureau of Animal Industry, Washington, D. C., so he can "Be Prepared" to assist in avoiding and controlling them. This Bureau also has publications on the care and feeding of animals.

Requirement No. 3

"Elementary signaling: Know the alphabet of the Semaphore Code; or the General Service (International Morse) Code; or the elementary signs of the Indian Sign Language Code, or the letters of the Manual Alphabet for the Deaf, either with one, or two hands."

Signaling

Out in the woods where telephones and telegraph messengers are not to be had, some method of signaling is essential. If different parties are hunting for a lost person, for example, signaling enables them to work together—advise when found and so on.

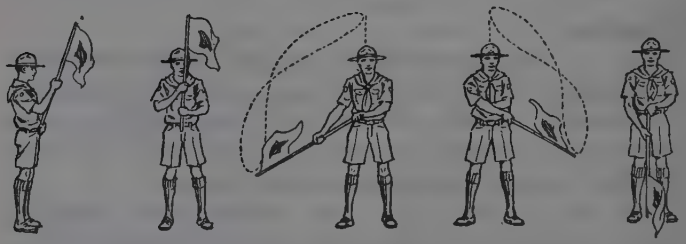
The Scout may elect the method used, General Service Code (International Morse), Semaphore, Indian Sign Language or Manual Alphabet.

The General Service Code is the most generally applicable and the most widely used code. The equipment is also within the reach of all Scouts so far as expense is concerned. It can be used with hand flags by day, and with torches, lanterns, and flashlights by night. It is used with the heliograph, an instrument for flashing the sun's rays at desired intervals and with searchlights. It can be given by whistle, drum or bugle, and it is universally used for wireless telegraphy, and, except recently in this country, on the telegraph lines.

This test should be passed with actual flags. It is not a speed test, but the Scout must know the alphabet. (Numerals are not required, but Scouts will want to learn them.)

Single Flag Or Wigwag Signaling

For the flag used with the General Service Code there is one position and there are three motions. The position is with the flag held vertically, the signalman facing directly toward the station with which it is desired to communicate. The first motion (the dot) is to the right of the sender, and will embrace an arc of 90 degrees, starting with the vertical and returning to it, and will be made in a plane at right angles to the line connecting the two stations.



The second motion (the dash) is a similar motion to the left of the sender. The third motion (front) is downward directly in front of the sender and instantly returned upward to the first position. One front indicates the end of a word, two fronts, the end of a sentence, three fronts, the end of a message.

In sending the message by hand flag, place yourself in such a position that the observer can see the flag clearly. Avoid standing in a shadow or in such position that the flag will appear the same color as the background.

Wigwag Can Be Learned As A Game

One who has not yet mastered the code can record a message being sent to him, recording the dots as

A	•–	H	••••	N	–•	T	–
B	–•••	I	••	O	–––	U	••–
C	–•–•	J	•–––	P	•––•	V	•••–
D	–••	K	–•–	Q	––•–	W	•––
E	•	L	•–••	R	•–•	X	–••–
F	••–•	M	––	S	•••	Y	–•––
G	––•					Z	––••
1	•–––––	NUMERALS International Morse Code				––•••	6
2	•• •–––					–––•••	7
3	••• •––					––––••	8
4	•••• •–					–––––•	9
5	•••••					–––––	10

R (Right) and the dashes as L (Left) and the front drop motion as interval. For example:

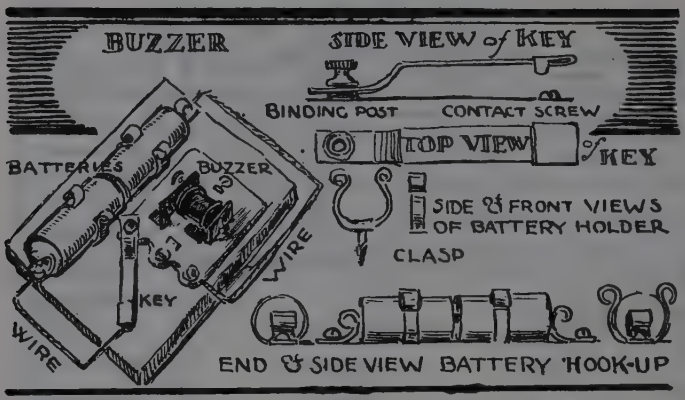
RLRR * R * RL * RLR * LR * * L * RRRR * R * * LRLR * LLL * LRR * R.

Such an observed message could be quickly interpreted if he had a copy of the General Service Code at hand. And by the same token he could spell out a slow message of reply himself.

The Scout is urged to learn the alphabet not by memorizing, A: dot, dash, etc.,—but by actually making the Right and then Left swings which mean A.

Pair with another Scout and send and receive simple letters that spell out words. This will be fun and very soon both will begin to know the letters and better still will know them in actual sending and receiving.

While the following groupings are useful, the code should not be learned as letters and symbols but learned by using them either with a flag or with a telegraph key, or blinker, or all. In times of emergency, these latter uses are especially valuable.



GROUP I DOTS		GROUP II DASHES		GROUP III OPPOSITES			
E	.	T	–	A	.–	N	–.
I	..	M	––	B	–...	V	...–
S	...	O	–––	D	–..	U	..–
H	....			F	..–.	L	.–..
				G	––.	W	.––
				Q	––.–	Y	–.––

GROUP IV			SANDWICHES		
K	–.–	R	.–.	P	.––.	X	–..–

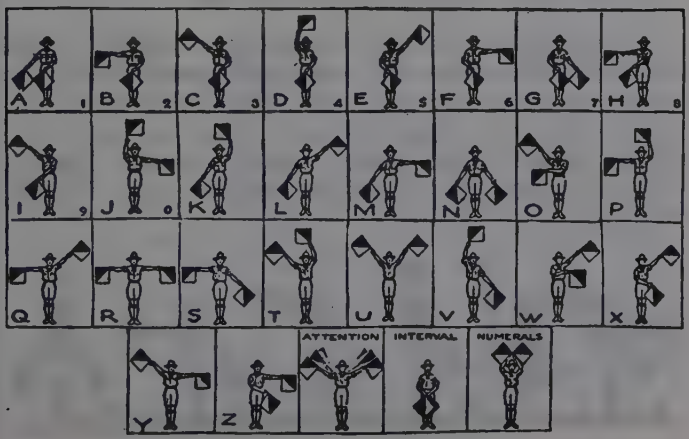
GROUP V		WITH NO OPPOSITES			
C	–.–.	J	.–––	Z	––..

Signaling By Hand Flags With Two-arm Semaphore Code

Hand flags, on account of their small range are of limited application, and are chiefly serviceable for use within organizations, within fixed positions, or for incidental signaling. The range with flags of the usual size is of course dependent upon light and background, but is seldom more than one mile with the naked eye. This system of signaling has been highly developed and on account of its rapidity and simplicity should be familiar to all Scouts. It is limited to visual signaling work and not adapted to general signaling as is the General Service Code. It will be found useful under many circumstances and is adapted to special work when rapid communication for short distances is needed. This method is also used to advantage for interior signaling.

The Semaphore hand flags for service use are 18 inches square, divided diagonally into two parts, one of red and the other white; the staffs are 24 inches long.

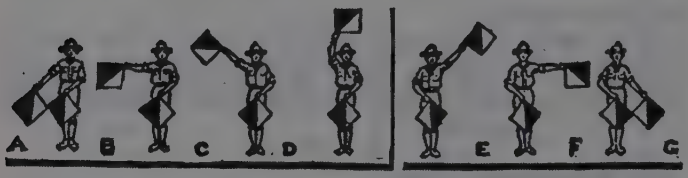
The Semaphore Code



Suggestions for Practice

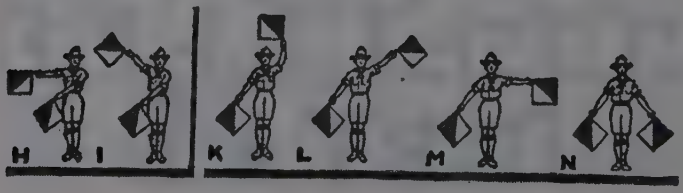
To learn the semaphore alphabet, the Scout should make every letter as he reads it. Practice every chance you get. If possible practice with another Scout—this gives double practice—both in sending and receiving.

First Part — The letters A to G are made clockwise with one flag, and with the other flag at the Bottom or "Interval" position. Practice them forwards and backwards. Then, make all possible words out of the letters, CAB, BAD, BAG, GAB, BED, FED, DEAF, BEEF, etc.

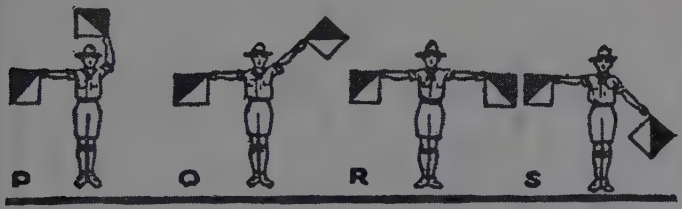


Master these letters before going on.

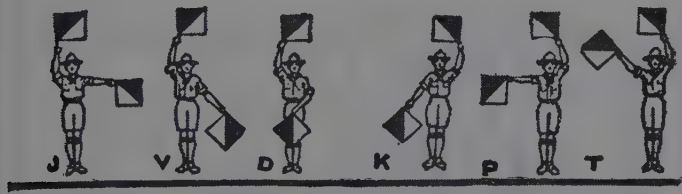
Second Part — H to N (except J) proceeds like a clock, with one flag in lower right position. Practice words reviewing letters A—G, then make these new letters H. to N. Practice word HAM, MAN, HAIL, MAIL, NAIL, FAIL, BAIL, GALE, HALE, MALE, DALE, LAID, FADE, MADE, MAID, HILL, MILL, FILL, etc.



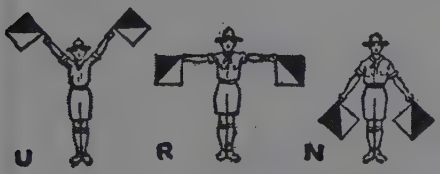
Third Part — These letters are made with the right hand in the 9 o'clock position straight out from body. Practice as before making new words, PAIR, QUAIL, RAN, SEND, SHARP, etc.



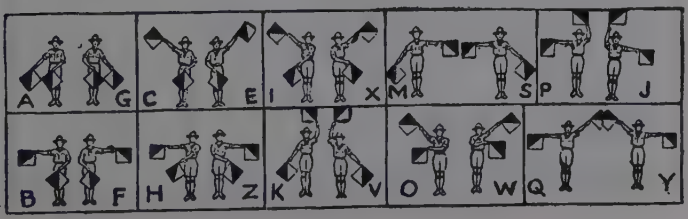
Fourth Part — This J V D—K P T group are all made with one flag above the head. They are the bent arm group. The list contains three new letters.



Fifth Part — The U R N group is easy to remember as the letters are made with both arms in the same position.

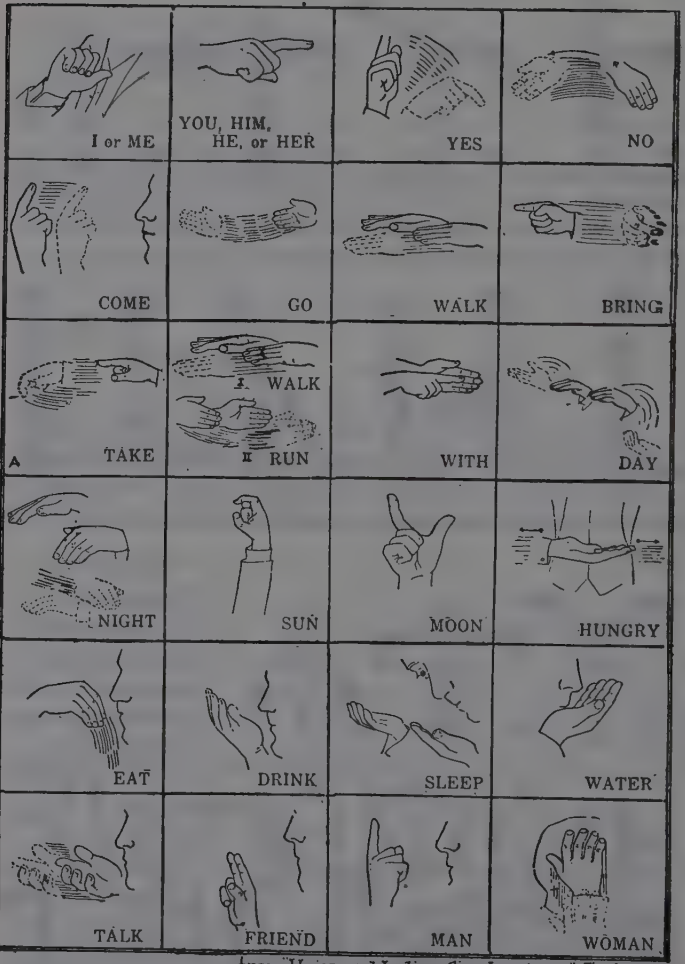


Sixth Part — There are 10 pairs of doubles or opposites as shown by the accompanying paired sets.



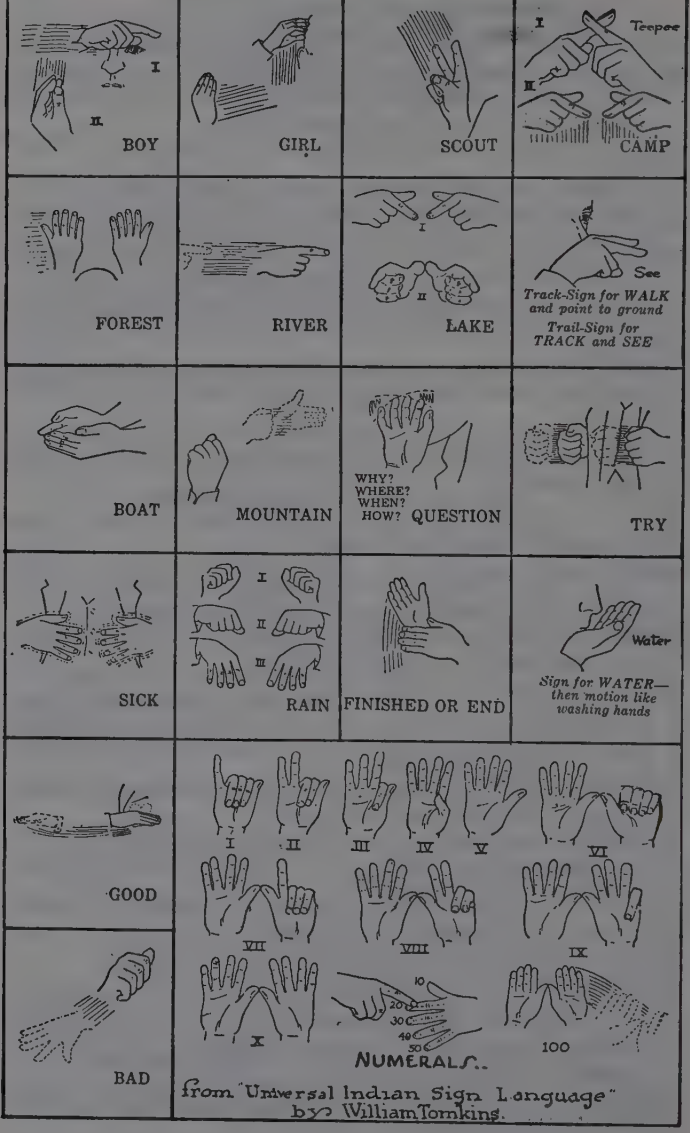
INDIAN SIGN LANGUAGE CODE

(Elementary Signs)



From "Universal Indian Sign Language"—Tomkins

I. With right thumb touch center of breast.
YOU, HIM, HE, or HER. Point right index finger.
YES (meaning: bowing head and body). Use right hand.
NO. Hold extended flat right hand, back up, in front of body, fingers pointing to left and front; swing the hand to right and front while turning hand.
COME. Extend right forefinger and sweep same toward face.
GO. Hold flat right hand in front of body, back to right, pointing front and downwards; move hand to front, and by wrist action, raise fingers to front and upwards.
WALK (motion of feet). Hold flat hands in front of body equally advanced; move hands alternately to front, upwards and downwards describing an oval; like treading water. For an animal, close the hands same motions as above.
BRING. Move the right hand well in front of body, index extended, then draw hand towards body, curving index finger.
TAKE. Push the right forefinger well out in front, to right of body, pull hand quickly towards body curving index finger.
RUN (to). Make signs for WALK and FAST.
WITH. Hold flat left hand, back to left, in front; bring right index against left palm.
DAY (earth, uncovered). Hold level flat hands, backs up, in front of face, 4 in. apart; sweep hands up and out in curve, ending opposite shoulders, palms up.
NIGHT (earth covered over). Hands 10 inches apart, backs up, right hand little higher. Cross.
SUN. Form, with index and thumb of right hand, an incomplete circle, space of one inch between tips; hand towards east; move in curve across the sky to west. Also used to denote the time of day. (Right hand held towards left indicates eastward).
MOON (night sun). Sign for NIGHT; then quarter moon, and hold it up in line of vision.
HUNGRY (meaning: cuts one in two). Move right and left.
EAT. Right hand, pass tips of fingers downward past mouth two or three times.
DRINK (meaning: drinking from the curved right hand). Carry to mouth from above downwards.
SLEEP. Made to right. Hands six inches apart.
WATER (meaning: drinking out of palm of hand).
TALK (meaning: throwing words out). For "little talk," index finger is snapped forward. For Council—as shown.
FRIEND (meaning: brothers growing up together). Southern Indians make sign of shaking own hands.
MAN. Elevate the right index, back out, in front of face.
WOMAN (combing the hair). Right hand on right side.


I
II
BOY
GIRL
SCOUT
I
Teepee
II
CAMP
FOREST
RIVER
I
II
LAKE
See
Track-Sign for WALK and point to ground
Trail-Sign for TRACK and SEE
BOAT
MOUNTAIN
WHY?
WHERE?
WHEN?
HOW? QUESTION
TRY
SICK
I
II
III
RAIN
FINISHED OR END
Water
Sign for WATER— then motion like washing hands
GOOD
I
II
III
IV
V
VI
VII
VIII
IX
X
10
20
30
40
50
100
NUMERALS.
BAD
from "Universal Indian Sign Language" by William Tomkins.

BOY (GIRL) Make sign MAN (WOMAN); bring hand down on right side to indicate height.

SCOUT. Push right hand slightly upward.

CAMP. Make the sign for TEPEE. Then with arms held horizontal in front form with thumbs and indexes an incomplete circle, tips 1 inch apart. Lower the hands briskly few inches.

FOREST. Sign shown is for TREES, extend right arm to right and front; then add MANY. (See page 225.)

RIVER (meaning: water flowing). Make sign for water, then move right hand to left of face, height of neck, index extended pointing left, move hand to right until opposite right shoulder.

LAKE (meaning: water and shape). Make sign for WATER; then with thumbs and index fingers make an incomplete horizontal circle with space of one inch between tips; then swing wrists together, tips of indexes apart.

TRAIL (to). Make the signs for TRACK and LOOK or SEE.

BOAT. Hollow hands in shape of boat. Push out.

MOUNTAIN. Push up the closed hand; then the sign for HARD.

QUESTION. Hold open hand, palm upwards, at height of shoulders, fingers and thumb extended; turn the hand 2 or 3 times.

TRY. Make motion like push or effort.

SICK. Hold extended hands in front of body; wave them out and in, two or three times, to denote throbbing.

RAIN (meaning: falling from clouds). Start in front of head. Repeat motion twice, slowly.

END. (meaning: cut off). With right flat hand strike down past finger tips of left hand.

GOOD (meaning: level with heart). Flat, right hand, back up, in front of and close to left breast, pointing to left; move hand briskly well out, to front and to right, keeping it horizontal.

BAD (meaning: throw away). Right fist held near breast, throw out and down to right, opening hand while doing so.

COUNTING. In counting from one to ten, hold the closed right hand in front, the back towards and about height of shoulder, edges of hand pointing up. For twenty, open and close both hands twice.

For a number of tens make the sign for ten, then hold extended left hand horizontally in front of body, and draw the tip of extended right index from base over the back of each finger to its tip, each motion of this kind representing ten and going as far as fifty; then holding the right hand in similar manner, from sixty to one hundred.

For counting hundreds, hold up both hands with both thumbs touching, hands held near right shoulder; then swing in a circle across to left and downwards.

Count a number of hundreds on backs of hands as in tens.

Manual Alphabet for the Deaf

Requirement No. 4

"Track a half mile in twenty-five minutes; or if in town, describe satisfactorily the contents of one store window out of four observed for one minute each."

Tracking (Done Individually Test)

Tracking is great fun for Scouts and it is also very useful. Time and again Scouts have helped themselves out of awkward predicaments by their ability to recognize tracks and make the proper deductions from them. In meeting this requirement the Scoutmaster with the candidate goes to the woods or wooded country, and if a suitable trail is found the Scout is asked to follow it, the Scoutmaster estimating the distances covered and keeping track by watch of the time elapsed. As it is difficult near a big city to find a trail that extends far enough, the Scoutmaster has recourse to another method. The Scoutmaster starts in advance and lays a trail by any one of these three methods.

1. Using corn, small bits of paper, rice or similar material.

Mink

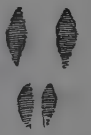
Cotton Tail

2. By placing on his foot some design in nails or spikes by which the Scout can trail him.

3. By laying a trail using the signs shown in the chapter on Signs, Symbols, etc.

More enjoyment can be had from following the trail of an animal. Domestic animals, such as a cat or dog, leave very good trails when snow covers the ground. To follow a dog through the woods when a light tracking snow is on is not only lots of fun but often leads to interesting spots that would otherwise not be observed. Wild animals do not often frequent the paths and trails made by man, and a dog will smell these out and follow them for great distances.

Raccoon



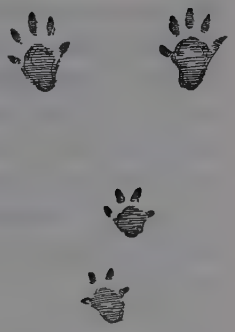
Gray Squirrel

Observation Test (Rarely Used)

There are some Scouts who are so unfortunate as to live in a city where it is difficult to do any tracking, real or otherwise. It is for them that this substitution of an observation test was authorized. The Scout goes with his Scoutmaster to some prominent business thoroughfare. The Scoutmaster will pick out four different store windows and allow the Scout to study the contents of each for a period of one minute. After all four windows have been observed the Scout and the Examiner go to some place away from the avenue and the Scout will describe the contents of any one of the four windows that

the Examiner may request. Four types of stores may be chosen, such as drug store and dry goods store, hardware shop and toy store. To do this satisfactorily, it is necessary for a Scout to spend some time at practice; he will be wasting his time if he thinks that he can do it without previous practice.

The following two articles deal with tracking and with trail marks and symbols.



Rat Track in Sand

ANIMAL TRACKING

Tracking animals or human beings is one of the world's oldest games. In snow, in mud, sand, dust, cultivated ground, tracks can easily be observed.

As Uncle Dan Beard says: "Really, Scouts, trailing is applying Sherlock Holmes' methods to the woods; it is using observation, noting what you see around you and the reasoning out the cause.

"When you are walking through the woods, note everything. For instance, a pebble in your path shows the damp side up. It only takes a little common sense for you to reason that something has been along there before you and knocked that pebble over with its

Opposssum

foot, otherwise the moist side would not be on top. If in a muddy place you find the track of a boy and the mud which is spattered nearby is still wet, you know that the boy has been there recently. If the mud is dry, then some time has elapsed since he passed that way. If the grass and leaves of a small bush are brushed the wrong way, showing the under side of leaves or grasses, you will know that something has been along there before you.

Eastern Chipmunk

"The more you know about nature the easier it is to decipher a trail. For instance, if you see by the leaves or grass that some animal has passed, and note high up on a tree some animal's hair, even a chump, would know that that animal was a large animal and had hair on it. But it takes a woodsman to know what sort of an animal it was, because only woodsmen are familiar with the hair of the wild animals; it might have been a moose; it might have been a deer, or it might have been a bear. If the hair on the tree is low down on the trunk, the first guess would be that it was from a small animal. It may have been a rabbit, raccoon, mink, dog or cat. The more you know about mink, or about muskrats, wild cats, and bears, the better able you will be to read these signs.

Badger

Rat

"There is no royal road to trailing. One must visit the woods, hit the trails, follow them out and reason them out to become an expert trailer.

"Take the Whiffle Poof and experiment with trailing. Next you can try following your dog or anybody's dog. If you can follow a dog you can follow a wolf. If you can follow a wolf you can follow a fox, although a fox, as a rule, will try to lead you astray. If you can follow a cow, you can follow a moose.

"If you can follow a sheep, you can follow a deer, that is, all other things being equal. I do not intend to say that if you can follow a sheep's tracks in the snow or on a dusty road that you can follow a deer's tracks in the summer woods; but experiment with domestic animals and graduate on wild animals.

Fox Terrier

Woodchuck

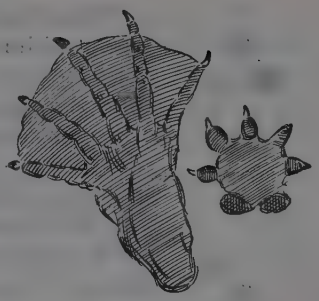
"In winter time nothing can move in the snow without leaving a tell-tale trail. That is the time you can find more joy working out the problem than at any other time of the year.

Mink

"While writing this I took a trip to Pike County, Pennsylvania. The snow was waist deep in the woods, but packed so tightly that animals as large as a lynx could walk over it without sinking, leaving their tracks very distinctly upon the surface. My camp is 116 miles from Head-

A Beaver's Trail

quarters at 2 Park Avenue, New York City, yet in driving down from my log house to the railroad station, a distance of four and a half miles, I saw one live deer, the fresh tracks of four others, the tracks of one Canadian lynx, two mink, one raccoon, one porcupine, numerous molly cotton-tails tracks, four or five different tracks of the big white hare, innumerable fox tracks, ruffed grouse tracks, and hundreds of tracks of different field mice which could not be identified from our position in the sleigh. I tell this to show the reader how many tracks may be found within a short distance of one of the largest cities in the world.



Beaver

"Some of the mice and rats not only leave a trail of their feet, but also a trail of their tails. Brother fox will trot along the road and suddenly his trail will cease. Apparently he has taken wings and flown away, but he has really jumped, doubled up his track, and commenced again. He might not know that you are following his track, but he always suspects that some one is. He comes to the muskrat house; he wants to examine it. He goes around it in two or three circles, first to be sure that there are no trenches or 42 centimeter guns hid around or behind the muskrat house. Brother Fox is always suspicious and makes a fine trail to follow. Heretofore, we have shown you diagrams of these tracks, more or less acccurate, but the real animals make real tracks which are always accurate. Go to nature and study them."

Weasel

Gray Squirrel

Classes of Tracks

—*Leonard Rossell in Scoutmastership Notes (Jan., 1926)*

Porcupine

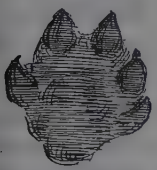
"There are bears, porcupines, hares, rabbits, animals that walk on the flat of the foot.

"There are those that walk on the toes, such as cats and dogs.

Domestic Cat

"There are also cattle, horses, antelope, deer, goats, pigs that walk on the point of the hoof or the toe nail."

Virginia Deer



"These determine the detail of the individual track, but the arrangement of the track is due to something else.

Otter

"The usual appearance of any individual track is naturally due to the general shape of the animal which made it.

Marten

"To the first class belong those mammals whose length of body is in proportion to their height, such as the cow, horse, dog, cat, deer, etc.

"The second class comprises animals whose hind legs are much longer than their front legs, such as rabbits, squirrels, etc. Their hind feet track in front of the front feet when running.

"The third class is composed of those animals whose legs are very short as compared with the length of the body, such as the marten, otter, weasel and mink.

"Group four includes those whose legs are very short in proportion to the length of body (as in group three) but whose bodies, nevertheless, are thick and heavy, out of proportion—such as the beaver, badger, porcupine and skunk."

These suggestions will start the Scout into an attractive field of observation in which he will always find new interest.

(NOTE—The animal tracks in this article were reduced from drawings by Leonard Rossell. A fuller treatment will be found in Tracks and Trails, a book by the same author.)

SIGNS, SYMBOLS AND TRAIL MARKS

—Daniel Carter Beard, National Scout Commissioner.

When America was first discovered there was a blanket of forest extending from the Atlantic Ocean to the Mississippi River, with the exception of a few prairies in Indiana and Illinois. This whole section of the country was one dense, dark, gloomy forest. It was traversed by traces which we now call trails. These traces were first made by the big game animals, then followed by the Indians, then by the pioneer trappers and explorers, then by the settlers with their packhorses; after them came the wagons, and now the same trails are traveled by us all in the cars of the railway companies.

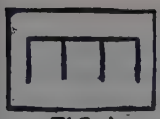


FIG. 1

FIG. 2

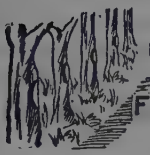


FIG. 3

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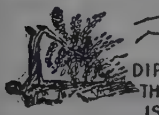

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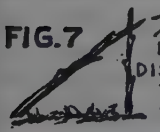

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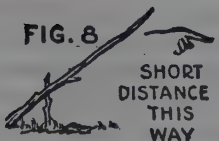

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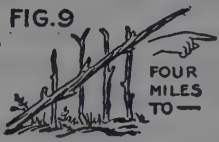

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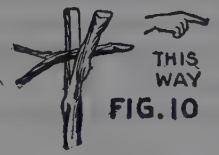

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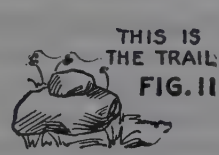

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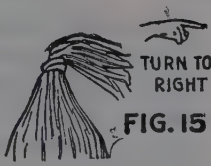

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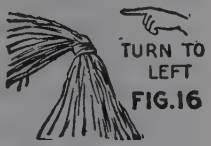


FIG. 16

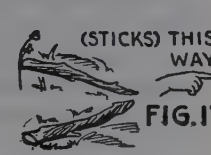


FIG. 17

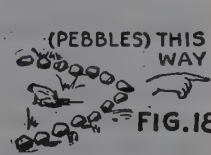
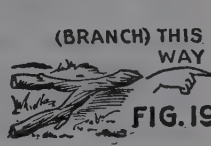


FIG. 18



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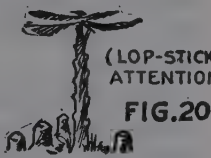


FIG. 20

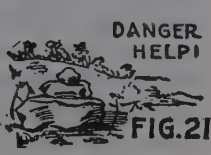


FIG. 21

Therefore in a forest a man would use some method of marking a trace or trail, not only that he could find his way back, but that another fellow might follow him. This the woodsmen did by blazing the trees, that is, by chopping a piece of bark from a tree every once in a while as they traveled, so as to mark a path.

Of course, Scouts today when in the woods never blaze the trees because Scout ranges are lands where the trees must not be damaged.

In towns, villages, and country, trails can be marked by chalk marks, or by use of small stones; care of course, must be used to not mark up people's fences or walls unduly. Also one can convey information to those following them—Bad dog (fig. 1)—Danger is shown by a rectangle with a round dot in the center (fig. 2).

Signs of Alarm, Danger and Trouble

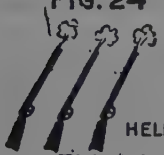
It is of vital importance to all outdoor people, including hunters, explorers, military men, and Boy Scouts, that three of anything stands for something serious, for a call for help, for a sign of danger. Three might be called the Paul Revere among the signs, spreading and giving the alarm. Two shots from a gun, for instance, may mean simply that a man has fired the right and left barrel of a shotgun, but three shots in succession would attract any hunter's or sportsman's attention, and if three shots were again repeated in the same manner he would know that some one was in trouble.

Three of everything does, and must, have the same general meaning, a cry for succor, help, or alarm—the white man's custom of firing three shots as a call for help, the Apache's custom of three smokes as a sign of alarm, the mountaineer's custom of three stones, one on top of another, also three blazes on a tree, three tufts of grass, three short blasts on a steamboat whistle, full speed astern—all indicate trouble; consequently in this

FIG. 22

FIG. 23

FIG. 24



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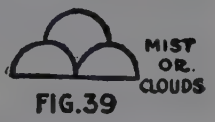

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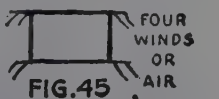


FIG. 45

FIG. 46

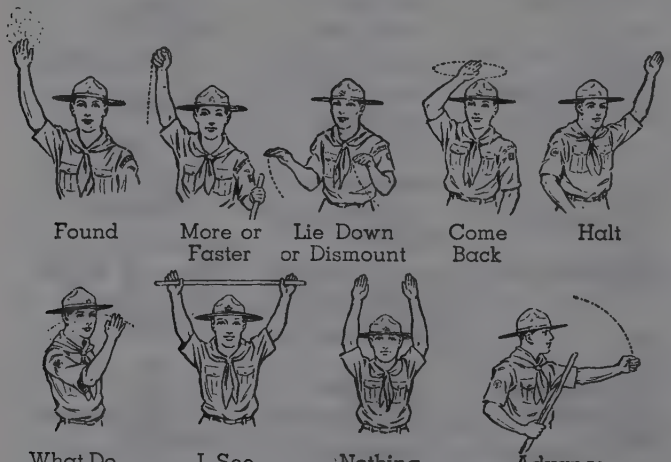
system of signs I have taken the liberty to ignore any apparent exceptions to the rule. SOS in the Morse Code is three threes . . . — — — . . .

Whistle Signals

1. One long blast means "Silence," "Attention," "Look out for my next signal." Also used in approaching a station.
2. Two short blasts mean "all right."
3. A succession of long, slow blasts means "Go out," "Get farther away," or "Advance," "Extend," "Scatter."
4. A succession of short, sharp blasts means "Rally," "Come together," "Close in."
5. Three short blasts followed by one long one from the Scoutmaster calls up the Patrol Leaders—i. e., "Leaders, come here."
6. Three long blasts mean "Danger," "Alarm," "Look out."
7. A succession of alternating long and sharp blasts mean "Mess call," "Grub."

Any whistle signal should be instantly obeyed at the double quick—no matter what other job may be on at the time.

Gesture Signals—Something is lost and a Scout is sent back for it. He picks up a handful of dust or other material and throws it in the air. This means "I have found it."



Double fists of right hand moved vigorously up and down above the head is the command to move faster. Two hands extended in front of the body, arms bent, elbows at side of body, hands motioned downward by moving the forearm from the elbow is the command to lie down or dismount. Hand whirled around above the head in a horizontal position is the command to go back. Hand held up, palm out, is the command to halt. Palm of hand toward front of the face, all fingers spread, hand moved from right to left a few inches in front of eyes is the question; "What do you see?" Stick, staff, gun, or fishrod held horizontally by the two hands above the head tells the observer that what they are looking for is in sight. Both hands extended above the head with the palms to the front means that you have nothing to fear. Double fist, arm extended above the head, then brought down to a level with the shoulder, fist extended full length of the arm in front is the command to advance.

Requirement No. 5

"Go a mile in twelve minutes at Scout's Pace — about fifty steps running and fifty walking, alternately; or lay out, measure by the stride method and stake a four-acre tract of land."

Scout's Pace serves two useful purposes—one is to cover ground without being tired; the other use is to measure distance with considerable accuracy.

You have read of the "lope" of the wolf—the easy yet fairly rapid gait he can keep up indefinitely. Scout's Pace is just such a gait.

The purpose is to practice until you can cover a mile in exactly twelve minutes, not varying more than fifteen seconds either way.

Take fifty steps (or 25) walking, then the same number at an even dog trot—then walking, then running again. The change of gait rests you.

Measure a mile using an automobile speedometer—then master Scout's Pace.

Training and Practice

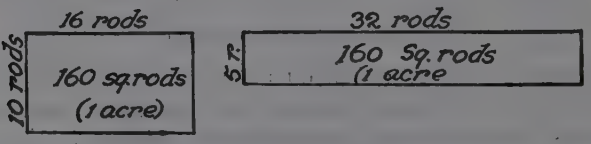
One way to "train" for Scout's Pace is to measure off 1/12 of a mile (440 feet) and practice covering that distance in *exactly one minute*—then gradually extend it to two, three such distances, until finally the mile can be done in 12 minutes.

An individual test. Scout in passing it, is not allowed to use any timing devices.

"Or lay out, measure by the stride method, and stake a 4 acre tract of land."

One Acre is 160 Square Rods

A rod is 16½ feet or three lengths of a 5½ foot Scout staff or stick. The Scout should experiment in walking to learn how many strides he must make to equal 1 or 2 rods. In laying out such a field, the Scout must sight toward some distant object and take precautions to make his lines straight and corners square. (90°.)



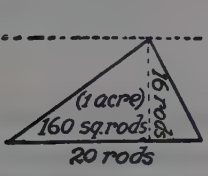
One Acre Rectangle

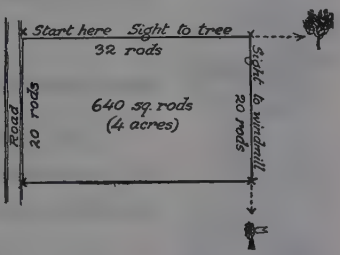
To lay out one acre, the area enclosed must be 160 square rods. If the frontage is 10 rods, depth must be 16 rods.

To lay out 4 acres. the area enclosed must be 640 square rods.

One Acre Triangles

If laid off as a triangle, the Scout must bear in mind that the triangle area is ½ the base X the altitude.





However, in farm usage the triangular field is less common and less desirable because of time and loss in plowing and cultivating corners.

Requirement No. 6

"Use properly knife and hatchet."

The knife and the hatchet or axe are about the most useful implements of a backwoodsman. In fact a good camper, hunter or mountaineer would be lost without them. The manner in which a camper handles his knife or axe is always a sure sign whether he knows anything about woodcraft or not. It is only the unskilled and untrained who brandish an open knife or carelessly handle unsheathed axes; experienced men are always extremely careful in their use. These two tools should be carried not as playthings but for serious work whenever they are required.

Scouts pride themselves because of their knowledge of handling an axe and a knife so as to prevent accidents. This commends them at once to woodsmen and campers. They never cut live trees or boughs without permission of the owner.

Beware of a loose handle. It is dangerous. Wedge it with soft wood or soak for two hours in warm water.

Knife and Hatchet

1. They should be properly taken care of and never used upon objects or for purposes that will dull or break them.

2. They should be handled in such a way as not to injure the user or any person nearby.

3. They should never be used to strip the bark off any tree or to disfigure other people's property by cutting initials thereon.

When Using The Knife——1. Whittle away from you, *not* towards you, to prevent injury.

2. Don't drive a knife into a stick by hammering on the back of it, and don't use the handle as a hammer.

3. Beware of wood with nails in it.

4. Keep the knife out of the fire.

5. Keep the blades clean; boil or scald the blades before cutting food.

6. Don't use the blade as a screw driver, or to pry things open.

7. Don't carry an open knife in your hand.

8. Don't lay it on the ground when not using it, or keep it in a wet place.

9. Know how to sharpen the blades properly. A knife, if kept in good condition, is a most valuable and important tool.

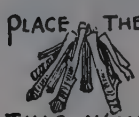
When Using The Axe—1. Never chop in such a position that the axe will cut you if it slips.

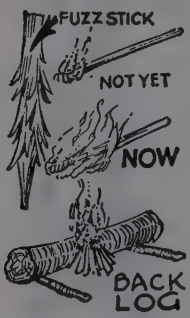
2. Never chop through wood on a hard surface.

3. Never chop pine or hemlock knots with a sharp axe.

4. If you carry an axe on your shoulder, always have the edge outward from your neck, otherwise you might stumble and be killed.

5. Always muzzle the axe in traveling. Carry axe by grasping handle close to the axe head with blade down and outward.





Requirement No. 7

"Prove ability to build fire in the open using not more than two matches — care for and put it out."

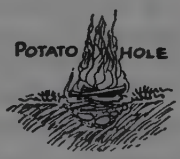
Where

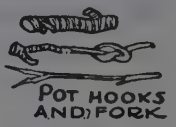
Pick a dry place or on a rock—away from trees and cleared so that fire cannot spread to the grass or bushes.

What

Get dry twigs, or if in rain split open piece of log and get dry interior. Cut into long thin slivers.

Pile these with some slightly larger pieces on end into a cone or pyramid and light them below and on the windward side. No paper or dangerous kerosene may be used.





Care

Especial care should be exercised to avoid spread of fire and upon leaving a fire be sure it is out. Plenty of water or sand or damp earth may be used—especially water, but BE SURE IT'S OUT.

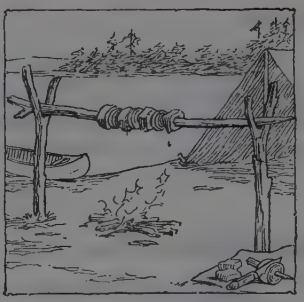
Requirement No. 8

"Cook a quarter of a pound of meat and two potatoes in the open without any cooking utensils."

In meeting this requirement prepared meat is not to be used.

Cooking Meat (Kabob)—While there are many ways in which to cook meat and potatoes without the aid of cooking utensils of any kind, a most satisfactory method is the Kabob described by the late James A. Wilder in his book on the "Pine Tree Patrol." Purchase the required quarter pound of meat and cut it into pieces about the size of a half dollar and 1 inch thick. Get a small straight branch and taste of the bark to be sure

The Cooking Fire is a Small Fire



that it is not bitter. Sharpen the small end of the stick selected and impale the piece of meat on it as shown herewith. After the fire has burned long enough to become steady with some coals, place the meat over it and turn from time to time, salting it the while. Searing it first will produce a burn on the outside which will prevent the juices from dripping onto the fire and being lost. The length of time required for cooking depends upon the heat of the fire and the desire of the Scout as to whether he likes his food rare or well done. In placing the meat upon the stick always sharpen the small end and use to impale the meat. On account of the thickness of the stick varying in diameter, a piece of meat impaled from the large end will not cling fast and consequently will not turn when the stick is twisted in cooking. Slices of onions and/or firm tomatoes placed between the squares of meat give a delicious flavor. In putting the slices of onion on the stick, peel the outer skin from the onion and with a sharp pointed stick make a hole through it, then slice (and not too thin) at right angles to the stick.

Cooking Potatoes—A safe way to cook potatoes is to use two fires. First dig out a hole larger than needed to hold the potatoes—line it with small stones, if available. Build a fire in the hole to heat the stones. When this fire dies down—put in the potatoes, cover them with damp earth—then on top of this build an 18-inch criss-cross fire and let it burn down. Start these potatoes an hour before meal time and cook other parts of the meal on the same fires.

Other Ways To Cook Meat—Where a fairly thin, flat rock is at hand, it may be used as a natural frying pan. Place it so you can renew the fire under it by resting it securely on stones or pieces of wood or over a small trench fire.

A broiler is made by bending a small green stick around like a tennis or squash racket shape and fastening enough cross sticks to hold the meat.

A piece of meat may be wrapped in leaves that are not bitter and cooked like or even with the potatoes in a stone-lined hole.

For other cooking suggestions see First Class Requirement No. 7.

Requirement No. 9

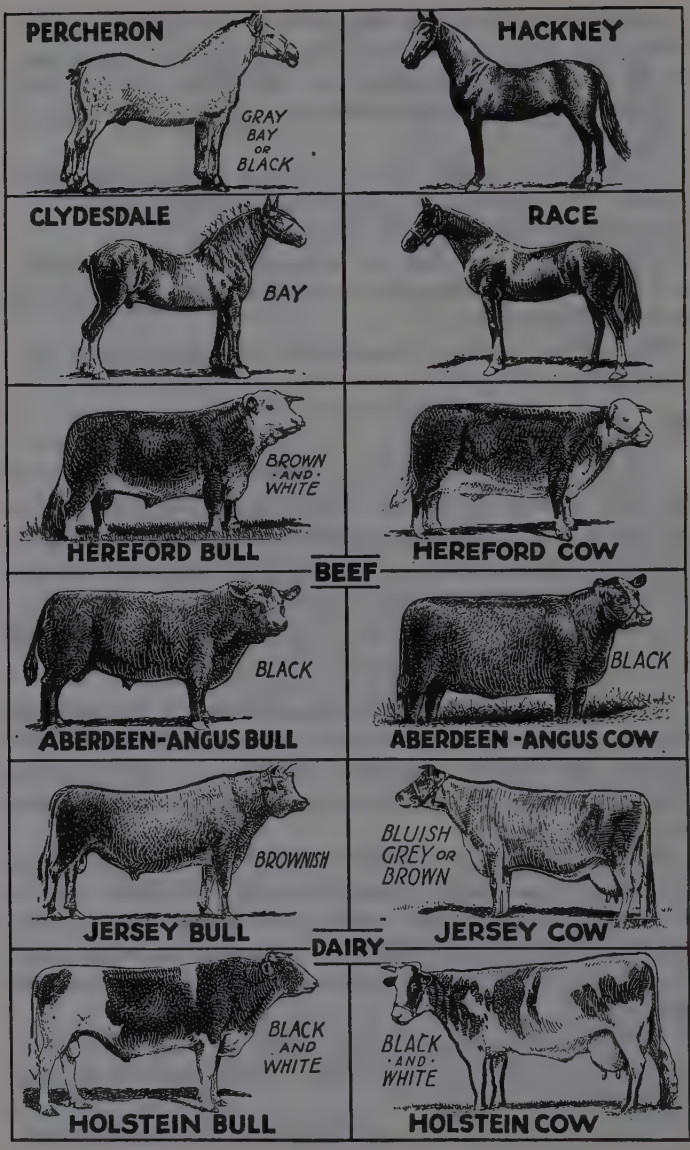
"Earn and deposit at least one dollar in a public bank or other savings institution (premiums paid on life insurance, if earned, are accepted); or earn, own and raise some farm animal; or earn and contribute at least one dollar or its equivalent, to the family budget or to welfare work in the community."

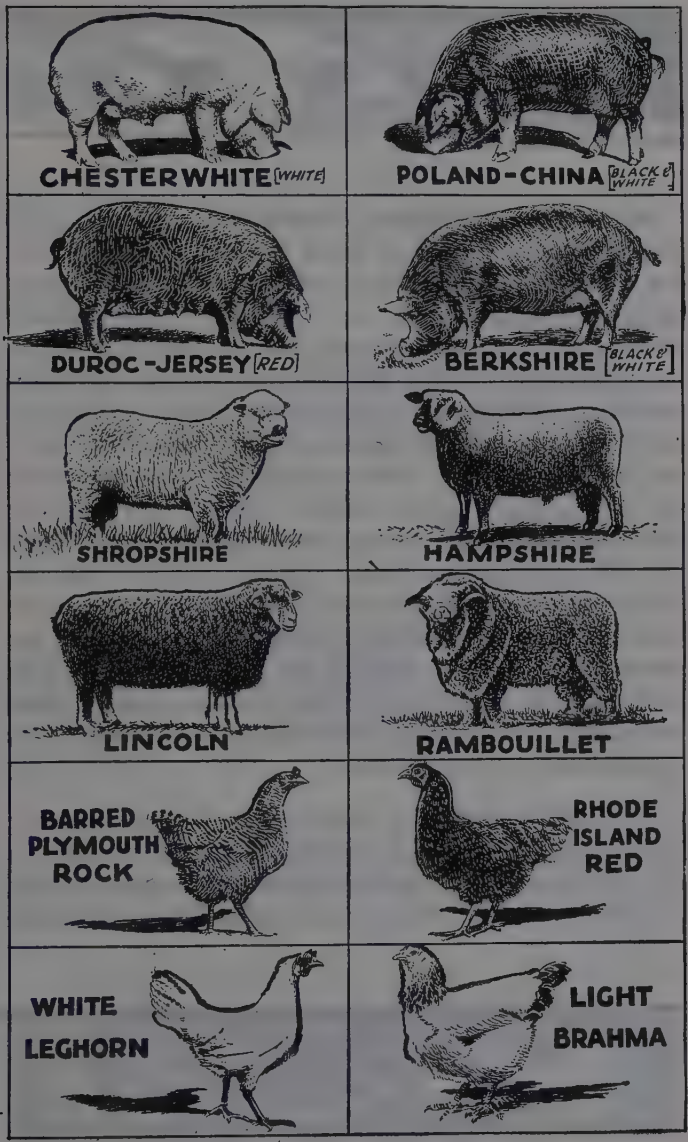
The purpose of this thrift requirement is to start the Scout toward desirable habits in his own finances. The secret of having money is simple—1. One creates value through one's work, and 2. One spends less than one receives.

The clay tablets of ancient Babylon record that same wisdom.* The sooner, therefore, that each Scout starts a savings account—one that keeps growing regularly, even by ever so little—the sooner he will be on the road to a home of his own, a business reserve, and independence.

Every Scout, to meet the spirit of the ninth law, should be thrifty. Every Scout should have a savings account.

*In book "Gold Ahead" by George S. Clason, Denver, Colo.


PERCHERON
GRAY BAY OR BLACK
HACKNEY
CLYDESDALE
BAY
RACE
BROWN AND WHITE
HEREFORD BULL
HEREFORD COW
BEEF
BLACK
ABERDEEN-ANGUS BULL
BLACK
ABERDEEN-ANGUS COW
BROWNISH
JERSEY BULL
BLUISH GREY OR BROWN
JERSEY COW
DAIRY
BLACK AND WHITE
HOLSTEIN BULL
BLACK AND WHITE
HOLSTEIN COW


CHESTER WHITE [WHITE]
POLAND-CHINA [BLACK & WHITE]
DUROC-JERSEY [RED]
BERKSHIRE [BLACK & WHITE]
SHROPSHIRE
HAMPSHIRE
LINCOLN
RAMBOUILLET
BARRED PLYMOUTH ROCK
RHODE ISLAND RED
WHITE LEGHORN
LIGHT BRAHMA

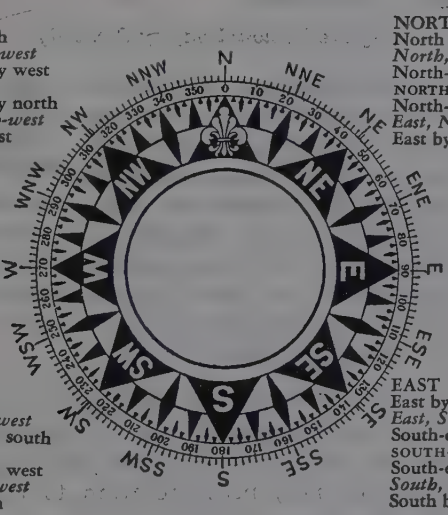
Suggestions For Earning Money—Helping with furnaces; sawing and piling wood; running errands, writing and translating letters; making a birdhouse for a neighbor; candling eggs at a produce house; making and selling model airplanes; carrying water; picking strawberries; providing parking space for automobiles; overseeing parking spaces; mowing lawns; selling papers; delivering milk; picking poultry; keeping chickens; selling BOYS' LIFE; cleaning up yards; carrying out ashes; distributing samples; delivering telegrams; caddying for golfers; driving auto truck; part time work in office or store; painting a fence or other articles; collecting scrap iron; sweeping schoolhouse; farm work; potato patch or garden produce; working in greenhouse; working in a lumber yard; putting in coal; working in doctor's office; cleaning neighbor's cellar; tending cows and milking; delivering telephone books; making handicraft articles; giving a "show."

It is surprising how a relatively small sum of money mounts up. If a twelve-year-old Scout puts $3.64 in the bank each month and the interest is compounded at 4% by the age of 55 he will have $5,000 in the bank.

Requirement No. 10

"Know the sixteen principal points of the compass."

Boxing the Compass consists in enumerating the points beginning with north and working around the circle as follows:



WEST
West by north
West, North-west
North-west by west
NORTH-WEST
North-west by north
North, North-west
North, by west
NORTH

NORTH
North by east
North, North-east
North-east by north
NORTH-EAST
North-east by east
East, North-east
East by north

SOUTH
South by west
South, south-west
South-west by south
SOUTH-WEST
South-west by west
West, South-west
West by south

EAST
East by south
East, South-east
South-east by east
SOUTH-EAST
South-east by south
South, South-east
South by east

The old point system has been discarded by the Navy and the degree method is now employed, the principal points of the compass being indicated in degree markings—North being 0; East, 90°; South, 180°; West, 270°; etc.

The points NORTH, EAST, SOUTH and WEST are the cardinal points of the compass.

One of the first steps in using a compass on hikes or trips is to find out how much the compass varies from true north in any section. (See map of Compass Variation in Chapter XV.)

Requirement No. 11

"Demonstrate his practice of at least five Rules of Safety at home, or work, or school, or on the street, or road, or farm."

Prevention of Accidents

(*By the National Safety Council*)

The Fun Of Adventure—Adventure is real fun! The pioneer boys whose adventures involved avoiding unfriendly Indians and animals—found their fun not in the danger involved as much as in the new experience and the care necessary to avoid danger. To have real fun, it is not necessary to risk one's life. In fact, all of our life is a great adventure and too big a thing to throw away in a moment of recklessness or thoughtlessness.

The few seconds saved by running in front of a motor car may be expensive in time if crutches are the result. One *may* get past it but also one may *not*. The speeding motorist *may* beat the train to the crossing but often he does not.

How foolish to take a chance that may easily maim one forever and ruin one's opportunities for future fun and usefulness. And these opportunities may come at any moment, particularly if one is "prepared." So safety is in the interest of more adventure.

Using Safety As A Guide—Suppose one likes to play football. This certainly is a great game for any live, active fellow. It is full of thrills; a touchdown against great odds is very nearly an act of heroism. But this

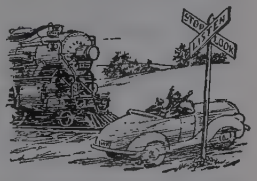
is not the whole story. Carefulness prevents fumbles as well as injuries. It saves scores as well as ribs. The safe way is the right way.

Learn the proper way of doing whatever is to be done.

"Be Prepared"—Avoid Carelessness—Because people do not control their actions, because they are thoughtless and reckless or because they are mentally lazy, 93,000 lives are now being sacrified annually. These are called accidental deaths.

During the World War, when American losses abroad totalled 50,000 killed and 180,000 wounded, 128,000 men, women and children were accidentally killed in the United States and over 10,000,000 others were injured.

Here was an Expeditionary Force exposed to the most effective death-dealing engines of the times actually being safer than the people back home.



Accidental Deaths (1939)

*Total of all accidental deaths	93,000
Total Home Fatalities	32,000
(Increase of 500 over 1938)	
Total Motor Vehicle Deaths	32,600
(About same as 1938)	

The first three items below directly interest a Scout, for he often comes in contact with the conditions under which they may occur.

Causes of "accidental" deaths (1939):

Burns and Scalds, including Fires	7,200
Falls	25,800
Drowning	6,700
Automobile	32,600
Trespassers on Railroad Tracks	2,424

**Figures Supplied by The National Safety Council.*

In a large central western state the number of automobile deaths yearly exceeds the total from diphtheria, typhoid fever, whooping cough, scarlet fever and measles.

Carelessness, we see, brings death, or—perhaps—an injury which may ruin opportunities for any more adventures.

Accident Prevention—These 93,000 fatalities a year, constitute a real problem. Every citizen owes America the "Good Turn" of helping save this loss of citizens. Everybody working together can do it, and the 93,000 death toll will begin to decrease.

Of course, the Scouts can do a great work in connection with efforts to reduce accidents, both by following the general rules themselves and persuading others to do the same. Scouts will be eager to "be helpful to others" not as well equipped with strength and health.

Statistics show that children under 5 years of age and adults over 50 years old are most often injured. They depend largely upon others for protection.

Here's a chance and privilege for Scouts!

Safety At Home—Get the "picking up" habit, and keep it. Don't allow objects that may trip folk to remain on the floor, and, similarly, pick up small objects, such as pins and needles, for which babies have an uncanny affection.

Supervise baby brother and baby sister and all the youngsters. See that they are not allowed access to the medicine chest; don't allow them to climb on porch railings,

ladders and furniture from which they may fall. Small children should never be left alone in a room with scalding water within reach; likewise, since many small children have been drowned in tubs of water, they should never be left alone in a room with a tub of water on the floor.

We can teach the younger ones by our own example, remembering that the desire to imitate is very strong in young children. It is up to us to encourage them in their safe and discourage them in their unsafe habits. So . . . we must not play around fires, or play with matches, nor stand on rickety, obviously unsafe supports, nor handle electric wiring or appliances about the house unnecessarily. We must be particularly careful to avoid touching a lighting fixture while standing in water or while touching a water tap or pipe. ,

The Scout should be a representative of safety in his own home.

An Orderly House Is A Safe House—Disorder invites fire, so keep the house in order, for if not, there will be a bad fire some day. Keep all combustible materials, other than fuel for immediate use, away from the heating apparatus. Burn greasy or oily rags and papers immediately after using them, either in the stove or furnace or in a special rubbish burner away from buildings, fences and trees. Make frequent inspections of closets, attics and other places where fires may start. See that gas jets or electric fixtures are not used as hooks on which to hang garments or towels.

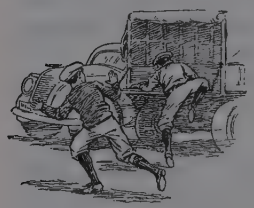
Also keep the yard in order, free from broken glass, rusty wires and similar sources of danger.

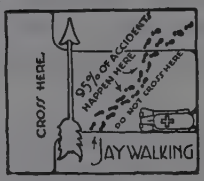
Gas is a hazard, both in the house and garage. If one detects the odor of gas in the home and cannot at once locate the source—an open burner—warn those in the

building, turn off the meter cock if it can be reached in safety, and notify the gas company.

Carbon monoxide escapes from an automobile exhaust. Colorless and odorless, this deadly gas is difficult to detect. Running motors in garages with the doors closed cause many deaths from this peril. Carbon monoxide may also result from incorrect operation of a gas burner, especially in an inadequately aired room. Have gas appliances inspected from time to time.

If a gassed person has stopped breathing, artificial respiration may be tried.





Safety Upon The Streets—The traffic problem is not a modern affair. Ancient Rome had the same problem. The story-books of that time relate cases of haughty senators and officers tearing through the streets in their fine chariots drawn by speedy blooded Arabian steeds and running down and killing pedestrians with impunity. These pedestrians were mostly freedmen and slaves, folk of no social status.

Unfortunately there are people like those vicious drivers of old-time Rome, but pedestrians are no longer slaves, and they and theirs may seek damages for injury. But the pedestrians must keep the rules for street and road conduct, if they hope for fair treatment from the drivers. Every Sccout knows justice and cooperation and is anxious to observe the following suggestions:

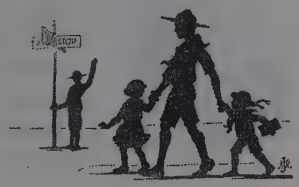
Always look both ways—left, then right—before crossing a street. Cross at the corners and at right angles, instead of diagonally. Await the policeman's signal or a green light—give the motorist his chance. Never run across the street; one false step may be the last. Of course, a true Scout need not be told to help small children and aged persons to cross busy streets.

Stand on the curb or in the safety zone when awaiting the street car. Always wait until the car stops when wanting either to board or to dismount. However, should the car start up under either circumstances, observe these rules which are confirmed by railway men in all parts of the country! Enter a street car by grasping the forward handle with the right hand and stepping on with the left foot first; get off facing forward and outward, stepping off with the right foot first and retaining a firm hold of the handle with your left hand until your feet are firmly on the ground. In alighting from a street car, look back for teams and autos. Ride *in* the car—it is dangerous to allow any part of one's body to project from the platform or car window.

Don't cross in front of a moving train or street car or close to the rear of a standing one. Climbing between cars at railway crossings is dangerous. If the train should start, then what? A ringing bell or moving signal at a railway crossing warns of the approach of a train—obey the signal. Crossing gates are to keep one from crossing; they are not to be crawled under.

A fire alarm means keep to the sidewalk! Keep other children out of the street at this time, and enter fire lines only when properly authorized.

Safety At School—At school, the Scout's principal duty will be to instruct the younger children in those safety habits which should be part and parcel of his own conduct. He can



protect them on the playground, assist them at street intersections, interpret traffic signals for them and, above all, see that they do not cross *between* intersections. On the playground, see that the smaller children get fair play from the older ones.

Scouts often help start a Junior Safety Council to investigate all unsafe conditions in the schools. The school authorities, or the local safety council, or the National Safety Council, Chicago, can supply particulars.

Scouts may help in the organization of fire drills.

Safety At Play—Children are most liable to be reckless when playing, for play induces an excitement in which control is more difficult. The Scout, however, trained to be poised and level-headed, should be able to enjoy himself immensely and at the same time retain his poise and cool judgment. He can aid the playground director in supervising play, commenting upon any unsafe conditions he may observe. When play is not supervised, he can quietly watch safety in his group.

Children should be encouraged to use playgrounds rather than streets or tracks.

Of course the Scout will be considerate in his sports; will not destroy property, public or private. Sling shots and air or "bee-bee" guns are dangerous playthings.

Kite flying is a fascinating sport, but it has its particular perils. Never use a wire string in flying, since contact with an overhead charged wire would mean either death or a serious accident. Fly the kite preferably in an open field, far from overhead wires. Speaking of wires, report broken ones to the police at once—one can never tell how dangerous they are—avoid handling wires hang-

ing from trees or poles and do not climb such objects, if they carry wires.

Don't loiter around a railroad yard, or play on or near the tracks. Read all warning signs at these localities and then obey them.

Strange dogs are unknown quantities—do not experiment.

Glance at the ground occasionally to avoid excavations or manholes, and remove anything that might cause slipping, also glass or nails.

Coast on a protected hill rather than on the street or highway and above all, don't coast across car lines or other busy streets.

Safety In Public Buildings — Self-possession is one quality that Scouts should cultivate. If we think back over the stories of various great fires, the biggest waste of life was caused as much by hysterical fear and panic on the part of the people as by unsafe buildings. The fires at the Ring Theatre in Vienna, the Iroquois Theatre in Chicago and in various schools would have taken a smaller toll of life, had the people kept their heads.

Upon entering a public building—school, church, theatre or assembly hall of any sort—look about for the nearest exit, and indicate such an exit to those with you. In an emergency, follow the instructions of and assist anyone who is in charge of clearing the building. Stampedes and panics may be caused by false alarms; be sure that there really is something wrong before you warn.

In an elevator, be courteous and do not push. Think of those weaker than yourself, young and old.

Safety While Hiking—Observe as many of the rules in "Safety Upon the Streets" as might apply. Walk on the left side of the road where you can see oncoming cars. When walking at night, wear some light-colored article of apparel in order to attract the motorist's attention, and carry a black and white striped staff.

Do not depend upon streams and springs for your water supply unless they are in settled communities and have been tested. It is best to carry your drinking water in canteens.

Take along adequate First Aid equipment for the individual or group. See Official Scout Catalog.

General Practices—In addition to the common dangers listed above, the average Scout will be called upon to meet many, many cases in which he will just have to use his head and apply his Safety knowledge, using common sense.

Give proper *First Aid* attention to all injuries, even the minor ones. Infection might otherwise result.

Scouts watch for unsafe practices or conditions, to protect themselves and warn others.

Thus *more* people can get *more fun and joy* out of the *"adventure of living."*

Safety On The Farm—Each year about 4,200 farmers are killed and some 200,000 injured. Farm children also, are exposed to constant hazards.

AVOID MACHINE GEARS AND KNIVES—Open gears, rollers, cutters, belts and pulleys, should have guards and covers.

In the battles of Manila and Santiago we had fewer injuries than Wisconsin farmers have yearly from corn huskers and shredders!

Adjust machines from rear when out of gear. Unhitch team before adjusting mower knives, discs, etc. The team may start up.

Edge tools—always cut away from you.

Watch for weak ladders; for nails in boards.

WATCH ANIMALS' TEETH, HORNS, HOOFS—A fly may cause a trusty animal to kick.

Be careful of animals with young.

Bulls, boars, stallions, dogs, are dangerous.

One is never safe with strange animals.

Requirement No. 12

"Furnish satisfactory evidence that he has put into practice in his daily life the principles of the Scout Oath and Law."

This requirement is not intended to send the Scout out to get letters telling "how good" he is. The real Scout would show more modesty than that. It does mean, however, that the Scout's conduct must have furnished the basis for other people to say to the Scoutmaster and the Board of Review "Here's a real fellow —a real Scout." This is vital. The Scout label of Uniform and Badge must mean a real Scout inside—one who is doing his best to live the Scout ideals.

Self Examination

It is important that the Scout meeting Requirement No. 12, should stop and quietly look himself in the eye to see if he had done his best, and if not, to improve himself quietly and modestly but none the less surely.

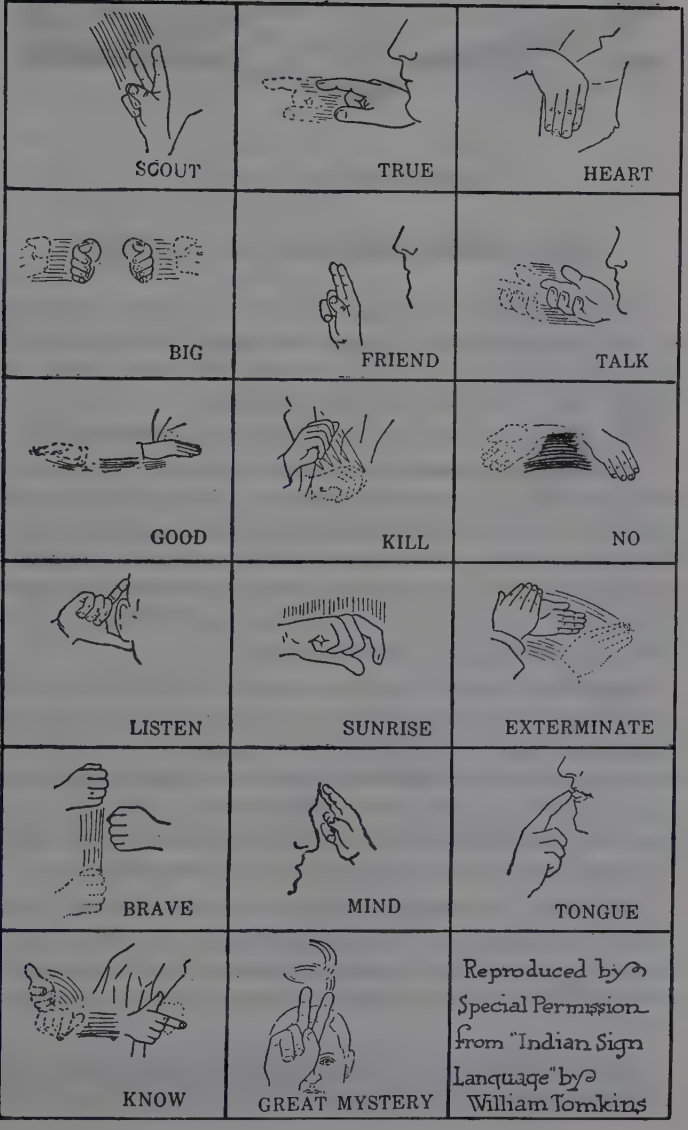
Measure yourself! Then "measure-up"!

Merit Badges for Second Class Scouts see Chapter XIV.

The Scout Law Titles In Plains Indian Sign Language—The sign language employed by the Plains Indians, had but 761 words in it, according to Wm. Tomkins, of San Diego, California, who has published it.

The "sign-words" which the Indian gave for the Scout Laws are very interesting to Scouts because they reveal something of how good a "Scout" the Indian was. His "sign-words" are simple but full of meaning.

The Scout Law Titles **A Scout is**	*The Indian "Sign-words"*	*What the symbols on the next page MEAN*
1. Trustworthy	TRUE	Like an arrow, straight from the heart and lips.
2. Loyal	HEART, TRUE	Stays that way.
3. Helpful	HEART, BIG	Cares about others.
4. Friendly	FRIEND	Growing up side by side.
5. Courteous	TALK, GOOD	Good—means on a level with the heart.
6. Kind	GOOD, KILL, NO	These 3 Indian words indicate no cruelty, no killing, but "good."
7. Obedient	LISTEN	Listens—heeds what is said.
8. Cheerful	HEART, SUNRISE	A remarkable picture "sunrise in the heart!"
9. Thrifty	EXTERMINATE, NO	Leaves something for others.
10. Brave	BRAVE	Knuckle to knuckle unflinching.
11. Clean	GOOD { HEART, MIND, TONGUE }	Meaning apparent — a wonderfully complete statement.
12. Reverent	KNOW GREAT MYSTERY	The two fingers up is the sign for wisdom. God the Great Mystery, above man, not easily understood, indicated by the waving motion.


SCOUT
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MIND
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KNOW
GREAT MYSTERY
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Language" by
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CHAPTER XII

THE MANNERS OF A SCOUT

Truly great men are modest. They do not strut. They do not seek attention. They do not boast. They are quiet —men of deeds rather than words. We know them by what they do and by the way they act.

Manners is a word we use to describe how one acts.

We are quickly rated—Whenever a Scout (or anyone else) meets any person in business, in applying for a position, in social contacts—he is rather quickly rated. To the one who knows how to act modestly, courteously and hence, acceptably, there comes myriad advantages. To the one who does not know how to act, there comes myriad disadvantages.

How People Act—Have you ever noticed what great differences there are in the ways people act? Some act pleasant, others grouchy; some seem honest, others crafty; some are courteous, some are rude; some are quiet, some are noisy; some are modest, some swaggering. But you have noticed that their manners, the way they act, proclaim to us what sort of men they are!

Knights—The ancient Knights were known for their courtesy and chivalry. In fact, gentleness is one unfailing characteristic of great strength. The weak man blusters to hide his weakness of body or brain or character.

Leaders—Have you ever noticed any of the great, outstanding leaders of the world? If so, you have been im-

pressed with the courtesy they extended to everyone. In fact, that is one reason for their being leaders.

Cannot Be "Put On"—Good manners are a business essential. Very little business can ever be done without them. Then too, like other habits, they are quite permanent unless replaced. They cannot be "put on" like new shoes, because they are habits. They can only be "put on" by *doing* them.

Fun—There is no conflict between courteous manners and fun. In fact those with good manners have less trouble and more fun and more friends.

What is fun, anyway? Anything we enjoy is fun for us.

Did you ever consider how many ways there are to find fun? Some find fun in working, some in loafing; some in keeping awake, some in sleeping; some in running, some in sitting; some in doing, some in dreaming; some find fun in walking, some in riding; some in hot weather, some in cold—we have an infinite variety of things, the doing of which is fun.

It is fun to shout sometimes, but anyone living on a little planet with a few billion other people soon learns that the rights of others must be respected, and that there are times and places where yelling does not *fit in.* It is fun for some people, sometimes, to "rough-house" but those times need to be selected rather carefully. Certainly in a Scout meeting, or on the street, or in a public conveyance is no place to "rough-house."

Some fellows find fun in "showing off" and boasting but others quickly tire of such inflation.

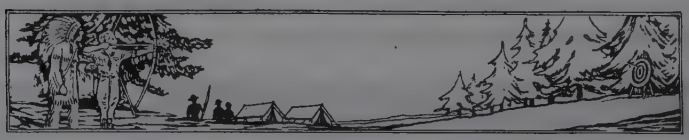
Some low-minded people find fun in bullying or teasing some smaller or weaker person. Such unfairness reminds one of the ancient tortures.

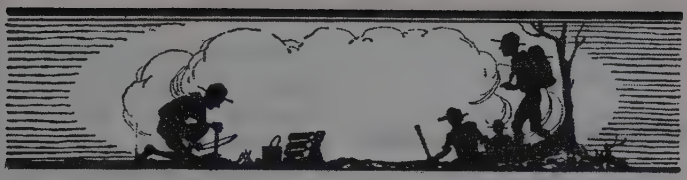
Some men find fun in staring at women and girls and trying to make advances to them. A well-bred Scout or gentleman will be of any desired service with a touch of his hat, but he never presumes to try to force his attentions or conversation upon them. This is one unfailing mark of the gentleman in any land.

The Scout—The Scout watches and finds his fun, when with any other people, in ways which do not disturb or annoy *them* in any way.

The heart of good manners is in caring about other people, in being as thoughtful and considerate of them as we would want them to be of us. In entering a house, it means that one cleans his feet. In a Pullman washroom, it means leaving the basin clean for the next man; in entering a car in cold weather, it means closing the door; in walking on the streets or public stairways it means walking on the righthand side and not crossing in front of people but rather crossing behind them.

The spirit of good manners, like the spirit of the Good Turn, calls for no unusual setting, but rather it enters into the frequent common relationships of everyday living. Indeed if you will re-examine the Scout Law and the Scout Oath and the Good Turn you will find that every true Scout, every Scout who obeys his Oath and lives The Law, is courteous and thoughtful. And that is one of the reasons why the Scout is honored, because he has learned how to act toward others so as to get along effectively with them. "A Scout is courteous."





CHAPTER XIII

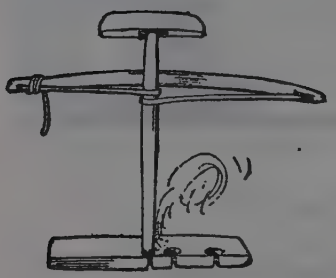
HOW TO MAKE FIRE WITHOUT MATCHES

The following article on "Fire by Friction" is not a requirement but every Scout will want to master this method which is widely used to start Council Fires.

EDITORIAL NOTE — For years the experts of the Smithsonian Institution in Washington, D. C. have given technical advice to the Boy Scouts in fire-by-friction research. Dr. Walter Hough and others have given valuable information on the fire making tools of primitive man and the continuous quest for best wood and material. This article by Mr. W. N. Watson, author of "Early Fire Making Methods and Devices," is in step with the Smithsonian findings.

Modern man makes more fires in a single day than the Stone Age man made in a lifetime. The daily consumption of matches in the United States exceeds half a billion. An automobile at a speed of 70 miles per hour makes over a million fires or explosions per hour. For early man, the making of a fire was a task that required persistence and skill and once made, fire was a thing to be carefully tended and kept.

The methods of fire making used before the invention of the friction match are becoming lost arts in many parts of the world. The Scout who can make fire by the methods used by the early Indians has the right to be



proud of his achievement. Friction fire making is an art and requires much practice. A working knowledge of these methods commands great respect for the fire craft of primitive man who was able to make his fires without matches under all conditions of life in the wilderness.

The methods of fire making by wood friction are divided into three classes: (1) Drilling, (2) Sawing, and (3) Planing. The bow drill is by far the most satisfactory method for the Scout.

The first thing is to find the right kind of wood, well seasoned and very dry. Primitive man used dead branches, with a preference for pieces that were slightly decomposed or "punky" due to fungus action.

If wood from a lumber yard must be used, it should be dried thoroughly, or better yet, baked for about two hours before an open fire.

Generally speaking, soft, fine-grained woods are best. Hard woods should be rejected. Resinous, gummy woods are worthless. The best woods include balsa, yucca, elm, linden and the root of willow and cottonwood. Other good woods are redwood, cypress, balsam fir, poplar, and cedar. Experimentation will add to the list. Yucca wood from the southwestern states, or the yucca flowering stalk from the flower garden, ranks first among the woods of the United States. Balsa wood from Central America is a superior wood, although, like yucca, it wears away rather quickly. Certain Indian tribes found that some roots were superior to the tree; these include willow, elm, and cottonwood.

A simple test for determining the quality of a wood is to carry out a trial drilling. A good wood yields a fine wood dust, which carbonizes with the formation of a spark which spreads to an ember. If the sample gives a coarse, gritty powder, it should be discarded. Also a thin shaving from good wood will retain a spark, when touched with a flame or ember. Usually, the drill and hearth are of the same wood.

The production of fire by wood friction consists of two operations, first, to get a smoldering spark or ember by drilling, and second, to turn this ember into a flame by adding tinder—fine dry vegetable fibers, bark or grass. The tinder used varies in each section of the country. One of the best tinders is made by pounding red cedar bark with a club. The fibers are then picked apart and rolled until fluffy, and dried and stored in a tight container. Other tinders are white cedar bark, (arbor vitae), inner chestnut or cottonwood bark, and fine dry grass. The production of flame is speeded up by placing a small layer of milkweed silk, cattail or similar "seed down" on the tinder.

The bow is about 24 inches long, with about a 2 inch bend or, better yet, a straight stick can be used. A leather thong, or a thin, flexible strap ¼" wide, is fixed to the bow through a hole in each end. The drill is 9 to 12 inches long and ⅝ to ¾ of an inch in diameter, pivot-shaped on top to fit in the socket and rounded on the bottom. The drill socket, of hard wood, waxed, (2 to 3 inches wide and an inch thick) a pine knot, or a piece of soapstone. It has an "A" shaped hole to receive the top of the drill. The Eskimo wooden socket had a soapstone or stone inset for

the pivot. A glass percolator top will serve as a socket. It is necessary to keep the friction in the socket to a minimum. The hearth is about 2½ inches by 10 inches, and ⅝ of an inch in thickness. The initial cone shaped hole is cut in the hearth near the side and then a "U" notch ⅛ of an inch wide is cut to the center of the hole. Be sure that the notch is free from fibers to permit the wood-dust to drop from the rotating drill.

The drill is slightly pointed only for starting a new hole and should be almost flat with rounded edges for fire making. If the drill head wears off center, it must be flattened with a knife, because a wobbly drill will scatter the wood dust. The position of the operator is shown on page 197. The hearth is held firmly under the left foot. The drill must be held in a perpendicular position with left wrist firmly braced against the left leg. The thong has one turn around the drill and the bow should be close to the hearth. The first strokes of the

bow are made slowly to test the adjustment. The slack of the thong can be taken up by pressing it down with the thumb. The relation between the firm downward pressure on the socket and tension on the thong can be determined by trial.

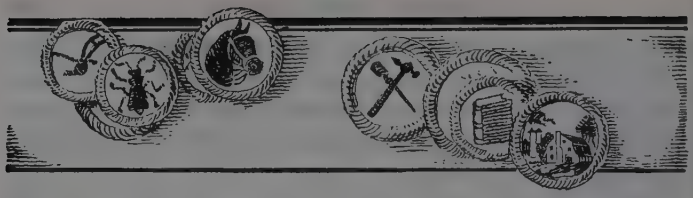
Strokes are long, and parallel, not short and jerky. After one feels the drill biting or grinding the wood, the speed of the strokes and the pressure on the socket are gradually increased, until dense smoke rises as the dust chars and a spark develops in the dust. The smoking dust from some woods such as yucca or elm can be fanned directly; for many woods, however, wait a few seconds before fanning. Gentle blowing or fanning produces a glowing ember, which is transferred to the tinder.

For speed, a flat wad of tinder (fine, dry, red cedar bark) is placed under the notch before drilling begins. The tinder is folded round the ember, held above the level of the mouth, and blown until the tinder bursts into flame.

The Indians often used another step; they held a piece of dry punk (pithy, rotten, hard wood, such as white oak or yellow birch) against the glowing ember, the punk caught the spark and served as a slow match. The latter was then placed in the tinder and blown into it to make a flame.

Flint and Steel (Strike-a-light)

Steel (high carbon hardened steel), when struck a glancing blow against flint, jasper, quartz or agate, etc., will give off sparks. If these be "caught" in charred cotton, fuse rope, candle wicking, charred cotton flannel—a single spark may start a fire. Such an outfit can be easily carried in one's pocket.



CHAPTER XIV

MERIT BADGES FOR SECOND CLASS SCOUTS

Originally, Merit Badge opportunities were open only to First Class Scouts. Thousands of them, however, found Merit Badge explorations to be so valuable, so interesting, so useful—that the door was opened to any Second Class Scout to select and go into not more than five of the following list of Merit Badge subjects. The full list of over a hundred subjects awaits him when he qualifies as a First Class Scout. These Merit Badge explorations have helped many Scouts to discover interests related to life work. They also tie in with the Scout's own program of *reading* and his life planning.

These have been grouped into three classifications—fifteen having to do with farm interests, thirteen with crafts and skills, and twelve on general interest subjects. Detailed requirements are listed in the Appendix.

GENERAL INTERESTS

Art
Bugling
Cycling
Firemanship
Horsemanship
Music
Painting
Pathfinding
Personal Health
Photography
Reading
Safety
Weather

FARM INTERESTS

Agriculture
Animal Industry
Beef Production
Bee Keeping
Corn Farming
Dairying
Farm Home and Its Planning
Farm Layout and Building Arrangement
First Aid to Animals
Fruit Culture
Gardening
Hog and Pork Production
Sheep Farming
Soil Management
Poultry Keeping

CRAFTS AND SKILLS

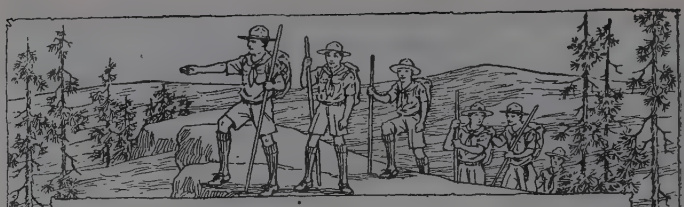
Basketry
Blacksmithing
Bookbinding
Carpentry
Cement Work
Handicraft
Leathercraft
Leather Work
Masonry
Metal Work
Pottery
Printing
Wood Carving

The Merit Badge itself is not a show. It does not say "See how good I am." Its wearing has to do with service. The First Aid Badge says "This Scout is prepared to help with First Aid." (See Badges in color section.)

The Scout who has mastered one of these skills may use it at the Troop meeting place perhaps, or at camp or in leading Cubs as a Den Chief, or when he is a bit older as a Junior Instructor in that subject for the Troop or Council.

He not only has the fun of mastering Wood Carving or Cement, for example, and of being able to make really useful and artistic things, but also of helping some one else progress.

Then, when the Scout has met his Requirements for one of these Merit Badges, he can come before the Committee on Advancement of the Troop or the Council and receive the approval of the Committee, which gives him the chance to meet personally some of the best and biggest men in the community.



THE SCOUTMASTER

By Edgar A. Guest

There isn't any pay for you, you serve without reward,
The boys who tramp the fields with you but little could afford,
And yet your pay is richer far than those who toil for gold,
For in a dozen different ways your service shall be told
You'll read it in the faces of a Troop of growing boys,
You'll read it in the pleasure of a dozen manly joys,
And down the distant future—you will surely read it then,
Emblazoned thru the service of a band of loyal men.
Five years of willing labor and of brothering a Troop,
Five years of trudging highways, with the Indian cry and whoop,
Five years of camp fires burning, not alone for pleasure's sake,
But the future generation which the boys are soon to make.
They have no gold to give you, but when age comes on to you
They'll give you back the splendid things you taught them how to do,
They'll give you rich contentment and a thrill of honest pride
And you'll see your nation prosper, and you'll all be satisfied.

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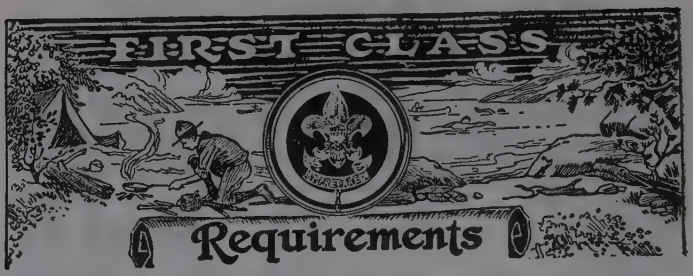
THE TRAIL TO FIRST CLASS RANK

PART IV



1. Have at least two months' service as a Second Class Scout and be able to identify the rank, length of service and position of leadership of Scouts and local Scouters by means of their Badges and Insignia. (See Color Section.)

2. Swim fifty yards. (Jump overboard, feet first into water slightly over his head, swim twenty-five yards, make a sharp turn about, and return to the starting point.)

3. Earn and deposit at least $2 in a public bank or other savings institution (premiums paid on life insurance, are accepted if earned), or plant, raise and market a farm crop or earn and contribute at least two dollars or the equivalent to the family budget or to welfare work in the community.

4. Send and receive a message by Semaphore Code, including conventional signs, thirty letters per minute, or by the General Service Code (International Morse Code) including conventional signs sixteen letters per minute; or by the Indian Sign Language Code, thirty signs per minute; or send and receive a message by the Manual Alphabet for the Deaf, thirty letters per minute.

5. Make a round trip alone (or with another Scout) to a point at least seven miles away (fourteen miles in all), going on foot, or rowing a boat, and write a satisfactory account of the trip and the things observed.

6. 1. Tell what First Aid is and what are its limitations. 2. Review Second Class First Aid requirements including demonstrations. 3. Describe symptoms of various degrees of shock, when to expect and how to deal with them. 4. Show what to do for heat exhaustion and sunstroke, describing the difference in appearance. 5. Tell what to do for freezing. Show what to do for frost bitten foot. 6. Tell what to do for internal poisoning from food or drug. 7. Poison caused by poison ivy, poison sumac, or poison oak. 8. Snake bite on hand. 9. Mad dog bite. 10. Show how to apply finger pres-

sure (digital) to control arterial bleeding of wrist, ankle and temple. 11. Apply tourniquet on upper arm and upper leg at correct pressure points and control venous bleeding below knee. 12. Explain necessity for immediate use of finger pressure control of bleeding; its advantages over tourniquet, and danger and necessary precautions in use of torniquet. 13. Show how to use triangular bandages as sling and 14. As directed for four of the following injuries—head, eye, hand, chest, hip, knee, foot (in each case with dressing over wound). 15. Apply splint to broken upper arm and place properly in cravat sling. 16. Immobilize broken collar bone. 17. Use neckerchief over shoe to support sprained ankle. Demonstrate with another person. 18. Four-hand carry and blanket or coat-litter carry. 19. A two-man carry with a chair. 20. With three other persons, method of lifting and transporting through a door and through a narrow passage a man who is unconscious, the Scout himself acting as captain of the team. 21. Fireman's drag.

7. Prepare and cook satisfactorily in the open, using camp cooking utensils, at least one of each of the following three classes of food, as may be directed: (1) Eggs and bacon, hunter's stew, fish, fowl or game; (2) pancakes, cornbread, biscuit or "twist" baked on a stick; (3) oatmeal or other hot cooked cereal. Give an exact statement of the amount and cost of materials used, and the number of persons intended to serve.

8. Read a map correctly, and draw from field notes made on the spot, an intelligible rough sketch map, indicating by their proper marks important buildings, roads, trolley lines, main landmarks, principal elevations, etc. Point out a compass direction without the help of the compass.

9. Use properly an axe for felling or trimming light timber; or produce an article of carpentry, cabinet-making, or metal work, made by himself; or demonstrate repair of a decaying or damaged tree. Explain the method followed.

10. Judge distance, size, number, height and weight within 25 per cent.

11. Be able to identify in the field (1a) 10 species of trees or plants, including Poison Ivy, noting such characteristic things as bark, leaves, flowers, fruit and scent; or (1b) 6 species of wild birds noting such characteristics as plumage, notes, tracks and habits; or (1c) 6 species of native wild animals, noting characteristic form, color, call, track and habits. (2) Be able to point out the North Star, and be able to name and point out at least 3 constellations of stars.

12. Furnish satisfactory evidence that he has put into practice in his daily life the principles of the Scout Oath and Law.

CHAPTER XV

HOW TO BECOME A FIRST CLASS SCOUT

Scouting offers the Second Class Scout the chance to advance to First Class rank — an advancement based on merit, on what one can do, open to everyone at his own speed.

Meantime, it also offers every Scout chances to hike into the out-of-doors; it beckons him to the fun of cooperating with fine fellows in the democracy of Patrol and Troop, along with citizenship chances to do his part in "good turns" and community service.

Requirement No. 1

"Have at least two months' service as a Second Class Scout and be able to identify the rank, length of service and position of leadership of Scouts and local Scouters by means of their Badges and Insignia."

To the Second Class Scout, new doors open. The fun of greater enjoyment of the out-of-doors is a newly

earned privilege, for the Second Class Scout has learned some of the woodman's secrets of being comfortable in the open.

The Second Class Scout knows something more, too, about the spirit of real citizenship—he's tried being a ready-man, ready to serve and do his share—plus. And that has brought a real thrill. Now, he is ready to climb up to the next rung in the ladder—that of the First Class Scout. While doing that, however, there are special Merit Badges which the Second Class Scout may explore.

Then, too, there is the chance to be a Den Chief, or leader of a Cub Den of 9-10-11-year-old Cubs. And that is a great chance—it is fun and gives the Scout a lot of leadership experience which helps him fit into life better. As Den Chief, he meets with a small neighborhood Den of these Cubs once a week in the afternoon—meets with them where they usually play.

The Second Class Scout has been in his Patrol and Troop long enough that he now can exert his influence to help them to run smoothly and grow and improve.

He also learns very thoroughly and carefully how to save life in the water and how to work at artificial respiration for those whom the water has nearly claimed. He is "prepared" thus to meet such emergencies.

The Second Class Scout is learning how to be a first rate hiker. He has found out what sort of equipment he needs and has begun to purchase it, or better still, to make his own. He now masters the mysteries of sleeping out-of-doors and goes farther in learning how to cook—well, he's been surprised himself at what he could cook.

Well—that's part of the fun awaiting the Second Class Scout and his Patrol.

Badges and Insignia

Scouts should study the badges and insigna illustrated in the color section and learn to recognize them on the Scouts and Scouters they meet. Insignia should be worn correctly!

Requirement No. 2

"Swim fifty yards. (Jump overboard feet first in water slightly over his head, swim twenty-five yards—make sharp turn about and return to starting point.)"

Every Scout owes it to himself and to other people to know how to swim.

This fifty-yard test is not a speed test and any stroke or combination of strokes may be used. Scouts who have ear or sinus trouble should not swim or dive unless approved by their physician.

The danger point for the beginner is that he gets frightened when he finds himself in deep water in an upright position. The following suggestions offer a remedy which one can work out himself.

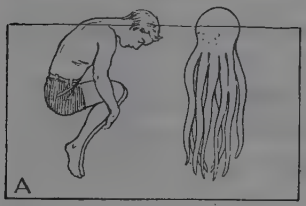
Learn To Swim (By The Brink Method)

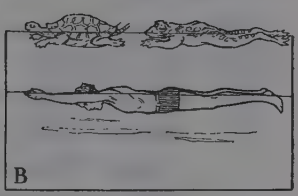
Step 1. Seeing; Step 2. Breathing — (a) Hold breath and open eyes under water—one can see easily. (Like duck.)

(b) Inhale through the mouth above water and exhale through the nose under water. (Like a motor boat.) Try this first, it's easy.

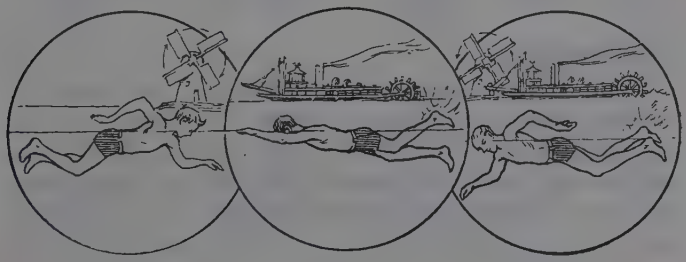
Step 3. Floating—(a) The easiest way to float in the water is to balance one's self like the jelly fish or lily pad—just pull the feet up.

b) Then one finds he can lie along the surface like the frog or turtle.



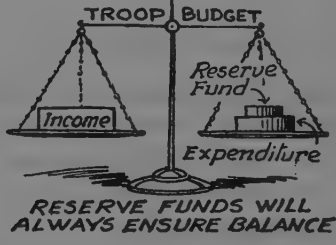


Step 4. Move—Then Keep Going — First with the hands—like the windmill, then with the feet like a paddle wheel steamer—THEN both together.



Requirement No. 3

"Earn and deposit at least two dollars in a public bank or other savings institution (premiums paid on life insurance, if earned, are accepted); or plant, raise and market a farm crop; or earn and contribute at least two dollars or its equivalent to the family budget or to welfare work in the community."



As Benjamin Franklin has said in his immortal sayings of Poor Richard:

"Every little makes a mickle."

"Every penny saved is two pence clear."

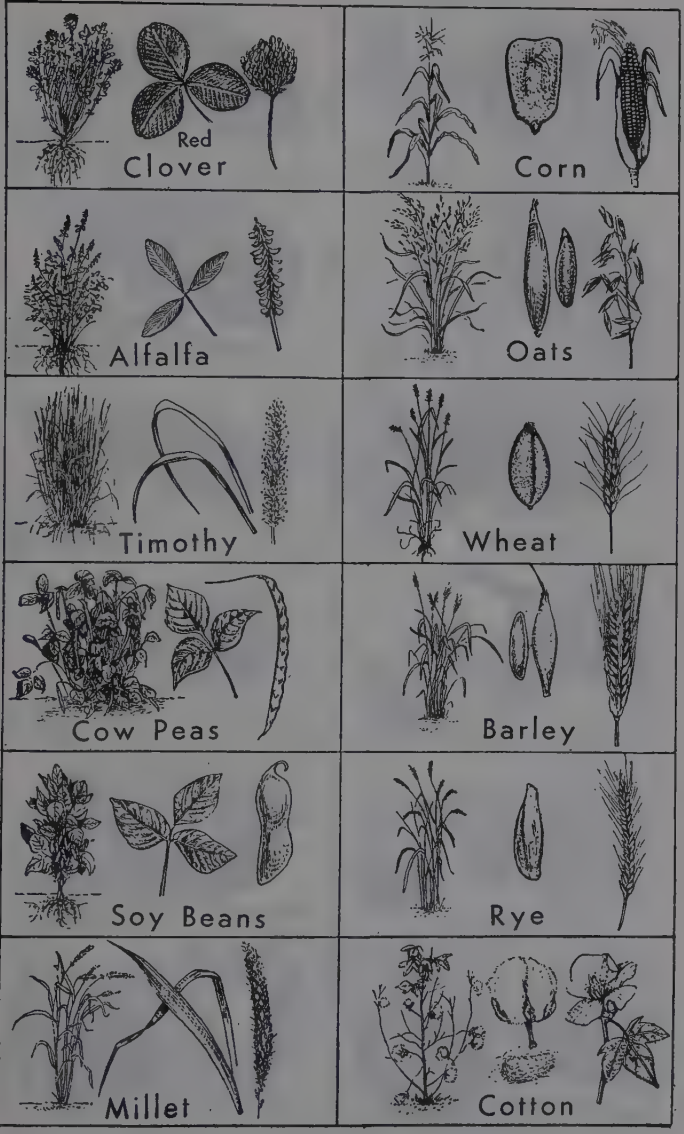
"A pin a day is a groat a year."

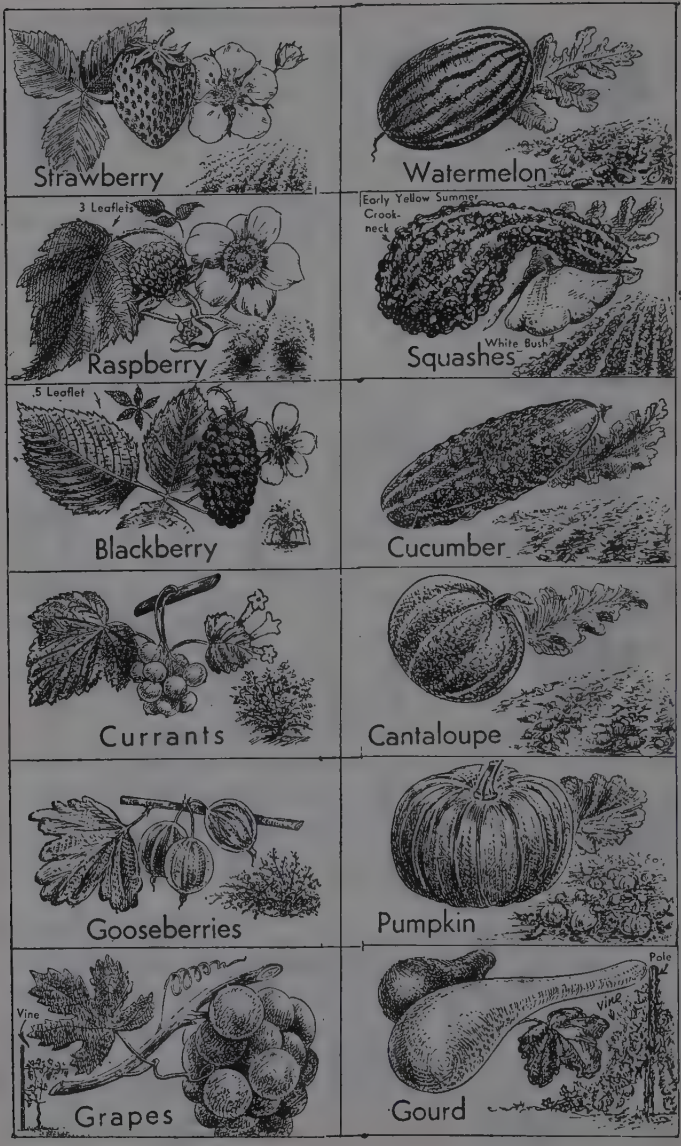
"Save and have."

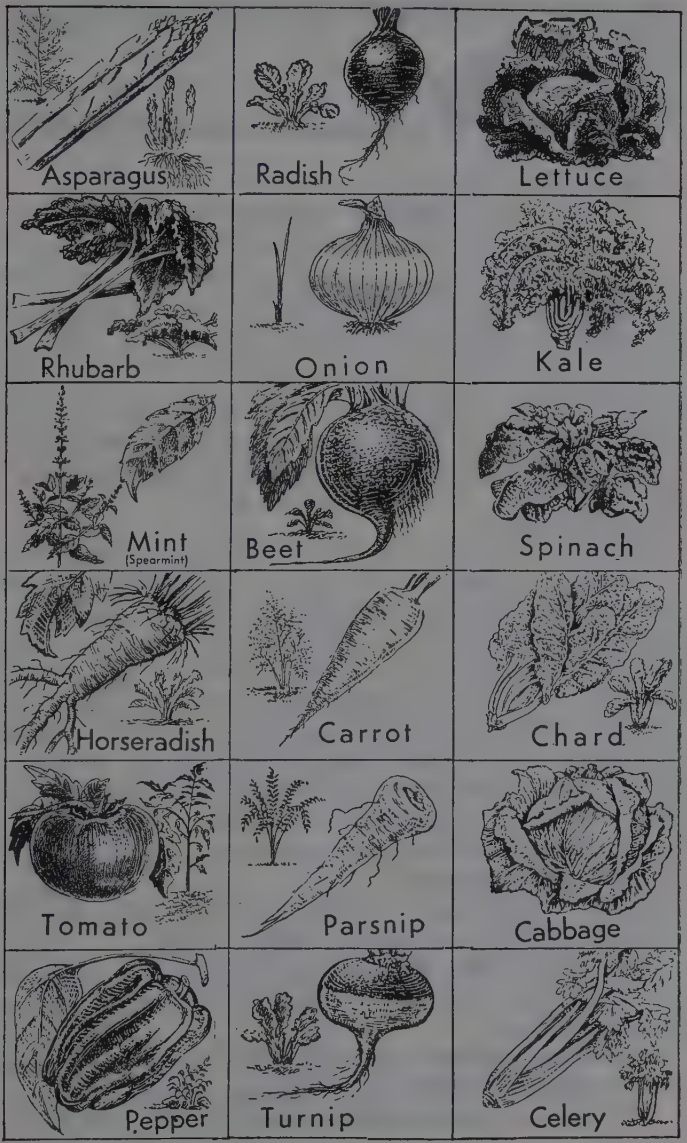
"All men are equally qualified for getting money, but it is in the Power of everyone alike to practice this virtue—Thrift."

Earn And Save

If the First Class Scout has followed the secret of financial independence as outlined under Second Class Requirement No. 9, he will now have gone a long way toward mastering himself, so that he spends less than he receives and therefore knows how to build a surplus.


Red
Clover
Corn
Alfalfa
Oats
Timothy
Wheat
Cow Peas
Barley
Soy Beans
Rye
Millet
Cotton


Strawberry
Watermelon
3 Leaflets
Raspberry
Early Yellow Summer Crook-neck
White Bush
Squashes
5 Leaflet
Blackberry
Cucumber
Currants
Cantaloupe
Gooseberries
Pumpkin
Vine
Grapes
Pole
Vine
Gourd


Asparagus
Radish
Lettuce
Rhubarb
Onion
Kale
Mint
(Spearmint)
Beet
Spinach
Horseradish
Carrot
Chard
Tomato
Parsnip
Cabbage
Pepper
Turnip
Celery

Requirement No. 4

"Send and receive a message by Semaphore, including conventional signs, thirty letters per minute; or by the General Service Code (International Morse), sixteen letters per minute, including conventional signs, sixteen letters per minute; or by the Indian Sign Language Code, thirty signs per minute; or send and receive a message by the Manual Alphabet for the deaf, thirty letters per minute."

Signaling Hints

When a message is to be sent the sender faces the station to be called and signals "attention." If the sender must keep in contact with more than one station, as with several units of a searching party or in a field game, it is necessary to make the station's "call." Each station should have an individual call. As soon as the receiver notices the call he signals "ready." The sender always makes a front before starting his message. When the sender finishes he signals the letters "AR" and waits for the receiver to signal the letter "R" in reply. Then both may leave their stations unless there is an answer expected.

Speed is secondary to accuracy. Every letter should be made distinct and with an easy rhythm.

Get so far away that it is not possible to call back and forth, or run easily. Send real messages of ten words or more.

Never pass between Scout signaling and station while he is signaling. Don't talk to Scout reading.

To select a visual station choose a point perfectly in

view of the communicating station; fix the exact position in which the flagman is to stand, so arranged, if possible, that when viewed from the communicating station he will have behind him a background of the same color for every position in which the signals may be shown.

The color of the flag must contrast as strongly as possible with that of the background.

Morse Code

The General Service (International Morse) Code may be signaled in several ways: By telegraph or wireless. By the heliograph which reflects sunlight, a flashlight or searchlight or any source of light which can be readily turned on and off to make dots and dashes. By any source of sound such as a whistle which will make dots and dashes audible for a good distance. Lastly, by the single hand flag or, at night, the beam of a flashlight or searchlight. A foot light is useful as point of reference.

The first position of the flag or beam is vertical. A movement ninety degrees to the right of the sender *indicates a dot* and a like movement to the left *indicates a dash.* An interval between words or sentences is indicated by making a "front" (lowering the flag or beam vertically in front of the sender). When using sound or light flashes intervals are made by allowing longer pauses than those between letters.

The inexperienced sender is often unable to make his signals understood by the receiving station, due to the fouling of the flag on the staff. This occurs when the sender tries to swing the flag down and back in the same line.

CONVENTIONAL SIGNS

Used by Sender

Morse	*Semaphore*	*Meaning*	*Explanation*
.—.—.— AAAA etc.	"Attention" waving overhead	Attention	I have a message for you. Make ready to receive.
..... EEEEE etc.	EEEEEE	Error Correction	I made a mistake. I will repeat last word.
Front	"Interval" Flags down Front	End of word	New word coming.
Front-Front	Front Front	End of sentence	New sentence starting.
.—.—. (AR as one letter)	AR	End of message	I am signing off now.

Used by Receiver

Morse	*Semaphore*	*Meaning*	*Explanation*
———— TTTT etc.	C	Ready	I am ready to receive your message.
MIN ——..—.	MIN	Wait a minute	I will be ready to receive your message in a minute.
Vertical	"Attention" waving overhead	Stop sending	I did not understand you. I will send back last word I caught.
R .—.	R	Message received	I got your message all right.

Manual Alphabet for the Deaf. See Chapter XI.

The correct position is to make the end of the staff describe a loop or figure eight, so that the flag on the upstroke follows a path about four inches toward the wind from its path on the down stroke.

When the wind is blowing from either side sending is of course difficult, but the experienced signaler makes the most of even this condition by facing slightly into or away from the breeze in a manner that will enable him to give the receiving station the greatest possible sight of the full fly of the sending flag. The flag at all times should be swung in a quiet easy manner, avoiding jerk and whipping. Too much speed to start with will soon tire the signaler and result in poor signals.

Semaphore Code

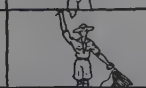
"Attention" is signaled by extending the two flags horizontally and sidewise, waving them up and down. A "front" or interval is made by crossing the flags downward in front of the body just above the knees. Numbers should be spelled out. However, if numerals are used, precede them with a "numerals follow" signal and end them with a "letters follow" signal.

Signal the Right Way

Signaling Code Chart

	INTERNATIONAL WIG-WAG. SIGHT FLASH. SOUND. WIRELESS.	SEMAPHORE HAND FLAGS	ARDOIS SYSTEM OF LIGHTS.	MARINE SIGNAL FLAGS. WHITE BLACK RED BLUE YELLOW
A	•—			
B	—•••			
C	—•—•			
D	—••			
E	•			
F	••—•			
G	——•			
H	••••			
I	••			
J	•———			
K	—•—			
L	•—••			
M	——			

Signaling Code Chart

	INTERNATIONAL WIG-WAG, SIGHT FLASH, SOUND WIRELESS.	SEMAPHORE HAND FLAGS	ARDOIS SYSTEM OF LIGHTS	MARINE SIGNAL FLAGS ○ WHITE ◍ RED ⊜ BLUE ● BLACK ⊕ YELLOW
N	▬•			
O	▬▬			
P	•▬▬•			READY TO SAIL
Q	▬▬•▬			QUARANTINE.
R	•▬•			
S	•••			I WANT A PILOT.
T	▬			
U	••▬			
V	•••▬			
W	•▬▬			
X	▬••▬			
Y	▬•▬▬			
Z	▬▬••			

from "Universal Indian Sign Language" by Wm. Tomkins.

ACROSS. Pass the partially compressed right hand over left on a curve.

AFTER (meaning: falling behind). Left and right hands well out in front of left breast, but right hand behind; then draw right hand to right and rear. This refers to time—a short move for short time—longer move for longer time.

ALL. Move right flat hand in horizontal circle from right to left, breast high.

ALL GONE. Point both extended hands at each other in front of breast. Then loosely wipe ends of fingers of right hand across palm and fingers of left, and vice versa.

AMONG. Weave right index through fingers of left.

ANGRY (meaning: mind twisted). Move hand by wrist action give small twisting motion.

ARROW (meaning: drawing an arrow from left hand). Hold left hand near left breast.

ASTONISH. Palm or left hand held over mouth. Denotes great surprise, pleasure, or disappointment.

AUTOMOBILE. Make sign for WAGON and then imitate steering wheel.

BEAR (meaning: large ears). Others add hands in front clawing downwards.

BESIDE. Extended right index against center of left palm.

BIG. Bring compressed hands in front of body, separate the hands—bringing them apart.

LITTLE. Hold right hand at height of shoulder, back to right, end of thumb pressing against inner surface of index, so only end of index is seen above thumb.

BIRD (meaning: wings). Imitate motion of wings. Small birds rapidly, large birds slowly.

BOOK. Look at hands as if reading.

BRAVE. Hold left fist 8 inches from center of body. Strike downwards with right fist. Some Indians make the signs HEART and STRONG.

BROTHER. Bring tips of two first fingers of right hand against lips, carry hand straight out from mouth, then sign for MAN.

CANNOT (meaning: cannot go through, or bounced back).

CHIEF (meaning: elevated, rising others and looking down).

COLD (as though shivering from cold).

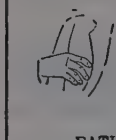
DOG (meaning: wolf drawing teepee poles). Draw right hand across in front from left to right.

DONE (meaning: cut off).

DOWN. Point down. UP. Point up with right index.

EFFORT. Place both fists as with an effort.

EQUAL (meaning: even race).


FATHER

FIRE

EXCHANGE or TRADE

FLAG

FOND

GIVE

HALF

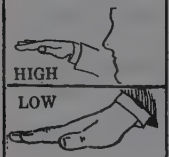
GRASS

HALT

HARD

HEAP

HIDE



HIS or HER

HOLE

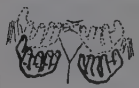
HORSE

HOUSE

HUNT

KEEP

KNOW


LAUGH

LEAF

LISTEN

LONG TIME

From "Universal Indian Sign Language" by Wm. Tomkins.

FATHER. With compressed right hand gently tap right breast two or three times; then make the sign for MAN.

FIRE (blaze leaping). Snap fingers upwards. Repeat.

EXCHANGE or TRADE. In semi-circle strike past each other.

FLAG. Left hand staff, wave right hand several times.

FOND (meaning: pressed to the heart). This expresses regard, liking, fondness, affection and love.

GIVE. Hold right hand flat, back to right, pointing to front and upwards, in front of body at height of shoulder; move hand out and down.

GRASS. Hold the hands, back downwards, arms extended downwards, to full lenght, in front of body, fingers extended, separated and slightly curved, pointing upwards; then swing apart.

HALF. (Cut in two parts.)

HALT. Hold right hand palm outwards, in front of body, height of shoulders; move hand sharply to front and downwards, stopping it suddenly.

HARD. Strike with right fist two or three times.

HEAP. First indicate gathering in from the sides, then bring hands upwards in curve to show the shape.

HIDE. Left hand held out flat, pointing right obliquely. Right hand, same pointing left. Pass right under left.

HIGH. Hold right hand, back up, in front of right shoulder to height desired.

LOW. Hold right hand, back up, down towards the ground.

HIS or HER. Indicate who, make sign for POSSESSION.

HOLE. Make circle with thumb and index of both hands; then, holding left in position, press compressed right through hole.

HORSE. Right index and second fingers astride left hand.

HOUSE (meaning: corner of log house). Cheyennes make shape of gable roof with two hands pointing up.

HUNT. Sign for WOLF, hand near eye, move it about.

KEEP. Right hand grasps left index firmly while moved.

KNOW (meaning: draw from heart).

LAUGH. Hold both hands partly closed, in front of both breasts, palms up; then move them up and down.

LEAF. Make the sign for TREE; then hold right hand out in front of shoulder, index and thumb curved, one inch between tips, other fingers closed, back of hand nearly to right, lower edge pointing to front and upwards; give a wavy motion to hand to represent leaf on limb of tree.

LISTEN. Turn hand slightly back and forth.

LONG TIME. Make sign AFTER, pull hands far apart.

MANY

MANY TIMES

MEDICINE

MEET

MONEY

MOTHER

NOON

NOW

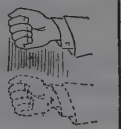
OLD

PEOPLE

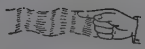
ROPE

SHARP

SING


SIT or REMAIN

SILENT


SNAKE

SNOW

STEAL

STRONG

SWIM

TASTE

THINK

WANT

WORK

from "Universal Indian Sign Language," by Wm Tomkins.

MANY. Hold hands well in front, to right and left of body, fingers curved and pointing to front; move hands towards each other on vertical curve downwards; move them slightly upwards as though grasping hands, and finish with hands opposite.

MANY TIMES (also, EVERY LITTLE WHILE). Touch forearm of left several times with side of tip of extended index of right hand, commencing near left wrist and moving hand towards elbow. Also means: OFTEN, ALL THE TIME, WHILE.

MEDICINE (meaning: mysterious and unknown, Great Spirit or God). Move hand upwards while turning from right to left.

MEET (to). Hold hands opposite each other, pointing upwards; bring the hands together until tips touch.

MONEY. Contrast with SUN.

MOTHER. With partially curved compressed right hand give two or three gentle taps or pluckings at left breast.

NOON. Sign for SUN to show position overhead.

NOW. Bring extended index finger of right hand about 8 inches in front of face, and without stopping carry it quickly several inches to front, stopping with a rebound.

OLD (meaning: walking with a stick). Repeat motion.

PEOPLE. Hold up both hands close in front of breast.

ROPE. Hold hands as in AFTER; then with tip of right index make a spiral curve, drawing right hand to rear.

SHARP. Lightly touch lower edge of right hand with ball of left thumb; then make sign for GOOD.

SING. Right 2 fingers in front of mouth; sign for ALL.

SIT or REMAIN. Hold closed right hand in front of and little below right shoulder; then move hand downward.

SILENT. Place tips of fingers of right hand over lips.

SNAKE. Move right forefinger, waist high, wavy motion.

SNOW. Hold extended hands in front of face, fingers pointing downward, lower in circular zigzags, to indicate whirling snow.

STEAL. (meaning: take.) The left hand indicates secrecy.

STRONG. Hold right fist above left fist and strike over and down with twisting motion as breaking stick.

SWIM. Sign for WATER; then swim with the arms.

TASTE. Touch the tongue with tip of right index.

THINK. (meaning: draw from the heart). Compare with KNOW.

WANT (meaning: give me). Move hand in slight curve downwards, outwards and upwards; turning hand.

WORK. Bring flat hands in front of body edgewise, few inches apart, right hand higher and back of left; then raise and lower the hands by wrist action.

Requirement No. 5

"Make a round trip alone (or with another Scout) to a point at least seven miles away (fourteen miles in all), going on foot, or rowing a boat, and write a satisfactory account of the trip and things observed."

The Fourteen Mile Hike—This adventure offers the Scout the chance to prove to himself, and to others that he has mastered enough woodmanship to go out on his own. This trip may be an overnight hike—going out one afternoon and back the next morning. It should cover cross country and woods avoiding automobile roads. Of course "lifts" via automobile or wagon are "out".

The Scout should explore and record things seen, condition of roads, types of vegetation and wild life — even as he might report for an expedition in the Amazon country. An automobile map will be valuable for locating the area covered.

Not more than two boys may make this hike together.

Requirement No. 6 First Aid

"1. Tell what First Aid is and what are its limitations.
2. Review Second Class First Aid requirements including demonstrations.
3. Describe symptoms of various degrees of shock, when to expect and how to deal with them.

4. Show what to do for heat exhaustion and sunstroke, describing the difference in appearance.
5. Tell what to do for freezing. Show what to do for frost bitten foot.
6. Tell what to do for internal poisoning from food or drug.
7. Poison caused by poison ivy, poison sumac, or poison oak.
8. Snake bite on hand.
9. Mad dog bite.
10. Show how to apply finger pressure (digital) to control arterial bleeding of wrist, ankle and temple.
11. Apply tourniquet on upper arm and upper leg at correct pressure points and control venous bleeding below knee.
12. Explain necessity for immediate use of finger pressure control of bleeding; its advantages over tourniquet, and danger and necessary precautions in use of tourniquet.
13. Show how to use triangular bandage as sling and,
14. As directed for four of the following injuries—head, eye, hand, chest, hip, knee, foot (in each case with dressing over wound).
15. Apply splint to broken upper arm and place properly in cravat sling.
16. Immobilize broken collar bone.
17. Use neckerchief over shoe to support sprained ankle.

18. Demonstrate with another person: Four-hand carry and blanket or coat litter carry.
19. A two-man carry with a chair.
20. With three other persons, method of lifting and transporting through a door and through a narrow passage a man who is unconscious, the Scout himself acting as captain of the team.
21. Fireman's drag.

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(1) First Aid—Just What Is It?

Here is a good definition of First Aid—if asked for one. It is the emergency treatment given in cases of injury or illness when a doctor is needed—before he arrives, and also: the immediate care of slight injuries. First Aid is not doctoring or nursing. *It is only first care.* If further aid is needed it should be given by a physician.

FIRST AID FOR FIRST CLASS SCOUTS

(2) Review and Experience

All Scouts probably have had a number of First Aid experiences during their service as Second Class Scouts.

As they grow older, more and more opportunities to put this skill to use and to learn from experience will come.

The First Class requirements have to do with more serious situations than those of the Second Class—they require skill and judgment, as well as leadership ability.

A First Class Scout is expected to be a pretty good First Aider. Thousands of brother Scouts have proved that they were very good indeed—so review the Second Class items now.

It is hardly necessary to say that the learning of these new things means a whole lot more than simply passing the requirements—just how many times in the past it has meant the saving of a life is impossible to say—but certainly in a great many.

(3) Shock

One often sees and hears the word "shock" in the study and practice of First Aid for it is present in some degree in most injuries and sometimes when there is no bodily injury, as in the case of shock resulting from fright or "shocking news."

Shock is a depressed condition causing stagnation in the blood vessels of the abdomen, as a result of which the brain and heart do not receive their normal blood supply.

Shock may be very slight, such as the weakness and the empty feeling that follows a mashed finger, or it may be complete collapse serious enough to cause death. Severe shock always follows severe bleeding.

Shock may come on immediately after the accident, or it may not appear for some minute, or even hours. Look for it! Expect it and you will be able to prepare and so decrease its severity.

Indications of Shock are—Pale face—lips, ears, and nails blue or gray.

Cold sweat—on forehead and palms, severe chill, shivering.

Pulse fast and weak.

Breathing irregular.

Patient completely exhausted—possibly vomiting or may complain of feeling cold or "sick to the stomach."

First Aid for Shock—1. Position. Lay patient down flat on his back with head low unless the injury is in the head and a fractured skull is suspected. If possible raise the feet several inches.

2. Heat. Wrap the patient in blankets, robes, coats, newspapers, etc. Apply hot water bottles, warm bricks, warm plates, etc., to one's own cheek or elbow before administering to patient, to be sure that they are not hot enough to burn the patient, always wrap —in cloth or paper before using.

3. Stimulants. Give aromatic spirits of ammonia, from ½ to 1 teaspoonful in ½ glass or more of water, or give hot coffee, or hot tea without cream or sugar. 1 to 2 cups, in slow sips. Stimulants by mouth should only be given when the patient is conscious. Do not give a stimulant in the case of severe head injury or severe bleeding.

If patient is unconscious, an ammonia ampule, aromatic spirits of ammonia on a cloth or smelling salts may be moved back and forth under the nose.

Treatment for the prevention of shock is about the same as treatment for shock. Keep the patient lying down and warm, and give stimulants if faint.

Encourge the patient. Show confidence by word action!

If necessary to wait for help for a long time outdoors and in cold weather, build a fire and if needed put up a wind break. The patient must be kept warm.

(4) Heat Exhaustion and Sunstroke

Shock from heat (heat exhaustion) is merely exhaustion or collapse due to heat and a temporary shortage of salt in the body. It should not be confused with sunstroke, which is due to direct exposure to the sun. The symptoms and treatment are quite different.

The symptoms and treatment of Heat Exhaustion are the same as those for fainting.

First Aid for Heat Exhaustion—If possible, remove the patient to a shady place where there is circulating air. Keep the patient lying down, lower the head and raise the feet. Apply external heat if the patient is cold. Give a stimulant such as aromatic spirits of ammonia or hot coffee. Give as much water slowly as patient will take, add table salt to water, 4 teaspoonfuls to a quart. This condition is serious and needs a doctor's care.

Sunstroke—Often Very Serious

Unconsciousness with a hot, red skin, high fever, strong and rapid pulse, caused by exposure to the sun is called sunstroke. It is often preceded by a throbbing headache.

First Aid for Sunstroke—Send for a doctor at once. Keep head and shoulders raised. Cool the body in any convenient way. The head, particularly, must be cooled. If possible, undress the patient and cover him with cloths dripping wet with cold water. Rub the limbs and body briskly with the cloths. Replace the cloths as they become warm, with cold ones. Continue cooling until the body begins to feel cool. Then stop. If the body becomes hot again, continue the cooling as before. Secure a doctor's services as soon as possible as many of these cases prove fatal.

(5) Freezing

A freezing person is likely to be unconscious when found and may be stiff from cold.

First Aid Treatment for Freezing — He should be wrapped quickly in warm cover and hurried to a place where he can be treated in a cold room—always start with cold room and raise temperature gradually. Remove his clothes gently and then wrap him in blankets. When placed in bed, arrange the covers so that they will not touch his body. Send for a doctor at once.

Apply artificial respiration if breathing has stopped. Only after circulation starts to return to normal should the temperature of the room be raised. When patient is able to swallow, give hot drinks of tea or coffee slowly. *He must have medical attention at once.*

Frost Bite

Freezing weather—tight shoes—tight gloves—long exposure—result in frost bite.

You may also suffer frost bitten ears, cheeks, or nose if the temperature is around zero or the wind is very strong at higher temperatures.

When the weather is cold and the wind cuts your face, beware of Jack Frost — and tight shoes and kid gloves. Wear woolen stockings and mittens.

For Mild Weather For Cold Weather

It is possible for frost bite to occur without its being known by the person affected, in dry air or a high altitude. If you see the ears of a companion growing white or a white spot beginning to show on his face, tell him quickly, for that is the indication of frost bite.

First Aid for Frost Bite—To treat frost bite, apply the hand, fur or wool to the part affected until circulation and warmth returns. *Do not rub with snow or ice,* for that is likely to break down tissue which may result in a serious condition.

If the feet are wooden and numb, remove shoes and stockings at once, wrap the feet in warm blankets, and rub very gently with the hands until they regain their warmth. Get out of the wind if possible while doing so.

(6) Internal Poison Accidents

Send for a doctor—but go to work instantly.

The following applies to all poisonous drugs taken by mouth, and in the case of a person eating poisonous food.

First Aid for Poisons—Wash the poison out of the stomach by giving luke warm soap suds, salt water. soda water, dish water, or even plain water. If the water is luke warm, it is more likely to cause vomiting. Start with 4 or 5 glassfuls. If vomiting does not occur, tickle the inside of the throat with the finger. Then give 2 or 3 more glassfuls of the liquid.

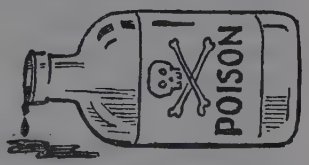
Repeat this process of washing out the stomach at least once more.

If burning or corrosive poison has been taken, give milk, or milk and raw eggs to drink after vomiting.

Treat for shock.

If breathing stops give artificial respiration.

If the drug taken is known to be a narcotic — opium, morphine, cocaine, etc. — *keep the patient awake* by shaking or even slapping if necessary. Give black coffee frequently.



Evidence

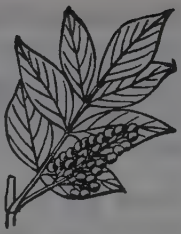
If the poison is known to be beverage alcohol, the effects will usually pass off with sleep. Remember that a man may smell of alcohol and still not be intoxicated. Look for other injuries.

(7) Ivy Poisoning

Poison ivy, poison oak, and poison sumac cause a severe inflammation of the skin, itching, and the formation of small blisters. Avoid these plants if possible.

Poison Ivy

Poison Oak



Poison Sumac

First Aid for Ivy Poisoning—When known that one has been in contact with any of these three, wash the exposed part of the body with laundry soap and warm water for several minutes. This will often prevent the inflammation from developing.

Make a thick paste of laundry soap shavings in a little water. Spread a thick layer over the inflamed area and leave on over night.

Consult a doctor, as soon as possible.

Some people think themselves immune to these poisons—in other words, that they can handle these plants without danger. This is possibly true in some cases, but it is not safe to count on it for one may lose such immunity.

(8) Snake Bites—Poisonous and Otherwise

Any kind of a snake bite requires treatment. Even the bite of so-called harmless snakes may be infected if neglected. Any wound requires attention at once.

In the United States there are four poisonous snakes:

The Rattlesnake—the most common and most talked about.

The Coral snake—very pretty, southern in his choice of dwelling places, and the most deadly of the Fearsome Four.

The Cotton Mouth Moccasin, another southern reptile with a big mouth and a hard reputation.

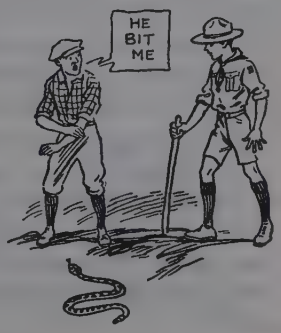
The Copperhead, found in almost every state, a sluggish fellow whose reputation is the least vivid of the quartet.

If we leave the little Coral snake out, we can ease our fears somewhat by knowing that about 85 percent of those struck by these snakes get well, even without treatment. Still it's a great idea to carry a sharp knife or a razor blade and a snake kit in your First Aid kit when you are browsing around in the country that they inhabit. Leather gloves, high boots, leather leggings are good protection.

If bitten by a non-poisonous snake, treat as any other wound—antiseptic, sterile dressing, and see the doctor.

But if it is a poisonous snake that bites you or some other, the best method known of caring for it is as follows:

First Aid for Snake Bites—1. Quickly apply a compression band made of a folded handkerchief folded triangular bandage or wide strip of rubber, 1½ to 2 inches above the fang marks and between them and the heart. The compression band should not be tight (do not twist it with a stick) enough to stop blood from coming into the part. As the swelling moves up, the compression band should be moved slightly, to keep ahead of the swelling. Be sure that the compression band is not tight enough to completely stop circulation. It should be loosened slightly every 30 minutes.



2. Quickly lay open the two fang marks by cross incisions ¼" deep and ½" long like XX with a sharp lance or

knife point sterilized by boiling, if possible. Other incisions of this size should be made wherever the swelling develops.

3. Suction should be immediately applied, preferably with a suction bulb, or with a heated large mouth bottle or other suction device, or with the lips if necessary. (Spit out and rinse mouth with clear water.) Suction should be continued for a half hour and repeated for fifteen to twenty minutes during each following hour.

4. Wet antiseptic dressings, which will keep the wound open and draining, should be applied between the suction periods.

5. The patient must be kept quiet. Movement stimulates circulation which spreads the poison.

6. Send for a doctor at once. If possible to move patient easily to doctor or hospital, do so without interrupting First Aid treatment.

7. Treat for shock always. Give as much black hot coffee or tea or hot water as the patient will drink. Do not give alcoholic stimulants.

The success or failure of the treatment depends to a great degree on the mental condition of the patient. It is undoubtedly true that fright kills many people who have suffered only from the bite of a non-poisonous snake. Therefore, it is important to endeavor to keep the patient in good spirits and at the same time quiet.

(9) "Mad" Dog Bite—Rabies

Dogs, and sometimes cats and skunks and other animals, are subject to a disease called rabies or hydrophobia which causes death.

This disease may be given to a human being through a bite or the scratch of rabid animals or by their licking a hand that has a break in the skin.

It is important to know that rabid dogs are not always vicious. They may act quite like normal dogs except that they snap at anyone that comes near them, friend or stranger. This is the so called "furious" rabies.

The dog may have the "dumb" type of rabies; then he is very quiet, does not move about, acts as though he had a bone in this throat and is unable to swallow. This condition sometimes causes the owner to search the throat with his fingers and in so doing, receive a scratch from a tooth which is covered with diseased saliva, result, rabies. *Hands* should be kept out of the dog's mouth under all circumstances.

Wild acting dogs are often not "mad"—when a dog runs wild, frothing at the mouth—that's a pretty good indication that he has fits and is not "rabid"! At times a rabid dog becomes partly paralyzed in the back and staggers about as if it had just been struck by an automobile, Beware of a sick dog. If, however, one is bitten or scratched by the tooth of any dog in any condition, it is best to assume that the dog is diseased and to go to a doctor, and have the dog locked up for observation. The Board of Health or the police in most places, if informed, will see that

the dog is taken care of. If this service is not available, the dog should be chained up and observed by a veterinarian for 10 days. If the dog does not develop hydrophobia (rabies) in this period, the person bitten is in no danger of taking the disease. The time required for rabies to develop after the person is bitten is usually 21 to 60 days, with 40 days being the average. Except in bites on the face, one can safely wait a few days while the dog is under observation. If the dog develops symptoms of hyrophobia, the person bitten should be treated at once by a physician familiar with the use of the Pasteur treatment, the material for which can always be obtained through the local or state department of health.

If the dog must be shot, the head should be kept intact so that it can be examined in a laboratory for evidence of rabies.

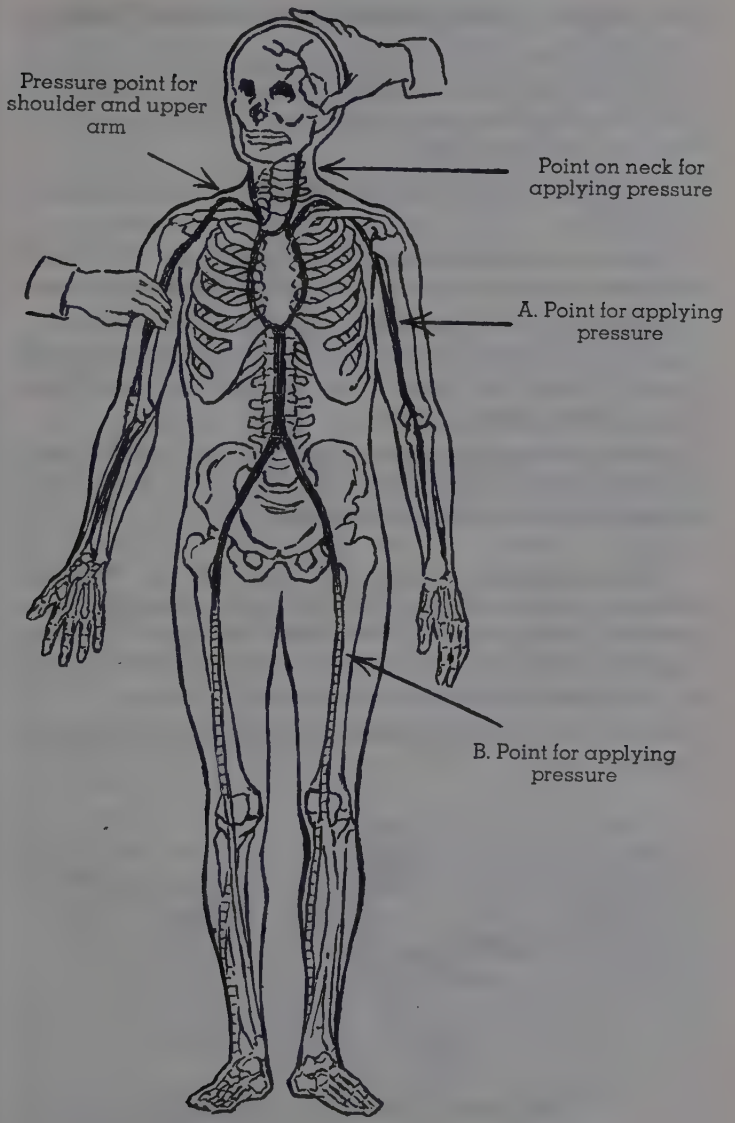
Care must be taken not to damage the head, otherwise an accurate laboratory test cannot be made. The head should be iced until examined in order to preserve it. There is considerable danger in removing the head. It should be handled only by an experienced person.

First Aid for Rabies—Wash the wound to remove saliva but be careful not to get the saliva on your own hands; this is an exception to the rule not to wash wounds with water. Hold wound under the running tap if possible. Apply antiseptic, let dry, and dress as any other wound.

Always consult a physician at once. He will give the wound treatment and, if necessary, will either give the Vaccine or Pasteur treatment himself, or will send the patient to the proper place to receive it.

(10) Pressure Points—Bleeding

There are three right and three left side main pipelines from the heart—one, up to the head—one, out to the arm—one, down to the leg. These become control points in cases of severe bleeding.


Pressure point for shoulder and upper arm
Point on neck for applying pressure
A. Point for applying pressure
B. Point for applying pressure

(11) Quick, Sure Action Stops Arterial Bleeding

Arterial bleeding is bleeding from an artery. It can be slowed down and stopped by pressure. Remember that bleeding from an artery comes in spurts—from a vein in a steady flow.

To do any good, pressure must be applied instantly, by hand.

Dig in at a point between the wound and the heart with the fingers and press the artery against the bone.

Make up your mind how you will apply the tourniquet, if necessary, while you are pressing with your fingers, but do not attempt to put it on until you have the bleeding under control.

Think of stepping on a garden hose to stop the flow of water; there you have an example of how pressure is applied to stop arterial bleeding.

Venous Bleeding—Bleeding from veins (venous bleeding) is relatively easy to control as compared with bleeding from arteries. The blood flows in a steady stream with very little pressure behind it and is darker in color than blood from an artery.

If the cut is on the arm or lower limb, raise the limb.

Four steps in applying the tourniquet

Pressure with the fingers along the edge of the wound away from the heart will usually control venous bleeding. Sometimes pressure on the edges toward the heart is also necessary.

Apply a sterile compress directly over the wound and bandage snugly, but not too tightly, in place. Pressure may now be applied with the hand directly over the wound dressing if bleeding continues, or pressure along the edge of the wound away from the heart may be continued.

All clothing or tight bands above the cut that might interfere with the return flow of blood in the veins should be loosened.

If an enlarged vein in the leg (varicose vein usually below the knees) bursts, the above treatment should be given and the leg should be raised and bandaged for some distance below the wound. The patient must be kept quiet. Secure a doctor's services at once.

(12) 'Ware the Tourniquet

A tourniquet is like a stick of dynamite—it's that kind of a friend—necessary at times but as deadly as that well known high explosive unless used with skill and rare good judgment. It is seldom necessary to use a tourniquet.

Dr. Harry Gentles of the American Red Cross has this to say about this much used but little understood device which may become a killer if carelessly handled.

*"The tourniquet is at the same time, one of the most valuable and most dangerous pieces of First Aid equipment. Its proper use saves thousands of lives every year but when improperly used it can be, and is, the cause of many deaths and permanent injuries.

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*From First Aid Handbook in the J. & J. Official Scout Belt First Aid Kit.

"It should never be used (in First Aid) except to stop the flow of blood from the cut main arteries of the arm or leg and then only after the bleeding has been controlled by pressure by use of the hands.

"While it only takes a second to press the artery against the bone with hands and stop the bleeding—it may take a whole minute to rig up a tourniquet, and in that minute much valuable blood is lost.

"But the hands may grow tired or perhaps it will be necessary to move the patient a distance for medical attention, and then the tourniquet can be used to advantage if it is done properly.

"Your Neckerchief folded into a cravat bandage about three inches wide makes a fine tourniquet. A handkerchief, or a belt, or a piece of cloth, will do, but a rope or small cord should never be used if it can be avoided—either is too hard and narrow and will cut in too deeply. The tourniquet should be long enough to go twice around the arm or leg.

"A pad of cloth should be placed over the artery (a hand's width below the arm pit or groin) so that when the tourniquet is tightened the pad will press against the artery and stop the blood flow.

"The tourniquet should be wrapped twice around the arm or leg with the ends knotted on the outside. Tie two more knots loosely in the slack and between them insert a stick and twist up the band carefully and only tightly enough to stop the flow.

"Remember the artery can be crushed and permanently injured by too great pressure, and that you must loosen up the tourniquet at least every twenty minutes to allow the blood to circulate through the smaller arteries that have not been cut and through the veins back to the heart.

"**Danger**—Remember that if you squeeze too hard or keep the tourniquet on for too long a time the arm or leg affected may have to be amputated to save the life."

When turning over the care of a patient on whom a tourniquet has been applied, be sure to call the attention of the doctor to the presence and location of the tourniquet. Do not cover a tourniquet with a bandage.

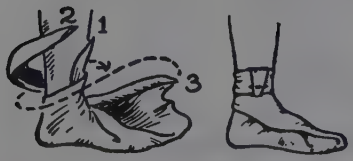
(13-14) Triangular Bandage

A most important binder for First Aid use is the triangular bandage.

It may be made by taking a square piece of cloth, folding it diagonally. and cutting along the fold, thus making two triangular bandages. A 36-inch square is recommended for Scouts. The Scout Neckerchief serves very well and may be used folded instead of being cut in two.

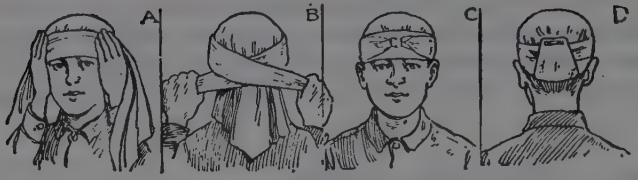
The triangular bandage is used open (unfolded) and also folded as a cravat. They may be used to hold dressings or splints in place, or as supports, such as slings, or for ankle or jaw.

A sterile dressing must always be applied over a wound before the triangular bandage is used.

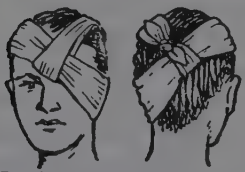


Open Bandage for Foot

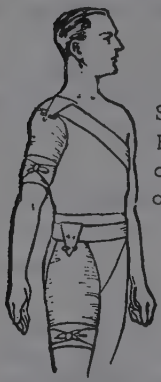
Open Bandage for Hand



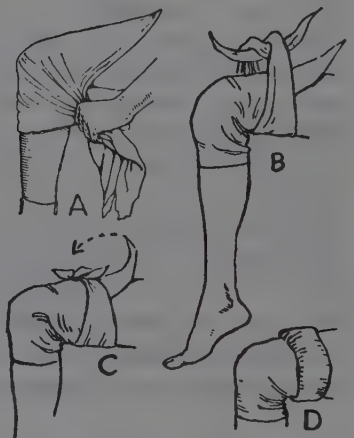
Open Bandage for Head



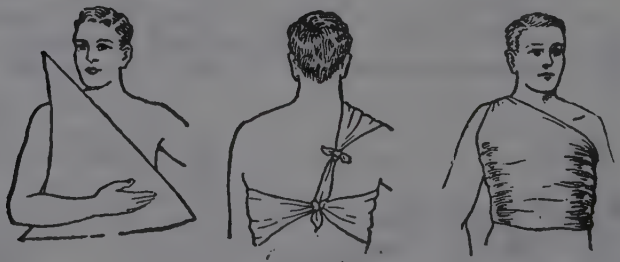
Double Cravat Bandage for Eye



Spica Bandage of Shoulder or Thigh



Knee and Elbow The elbow may be bandaged similarly to the knee.



Open Bandage of Chest or Back.

The bandage as shown is used similarly on the back

(15) Broken Bones or Fractures

Bones are somewhat brittle and break like sticks—sometimes like dry sticks and sometimes like green ones.

The sharp ends of broken bones are likely to stab into muscle, nerves, arteries and veins, and can do serious damage unless gentle and correct care is taken to prevent movement.

A broken bone is called a simple fracture if there is no wound leading from the break to the surface of the skin. There is little danger of infection in simple fractures and these usually heal in from 4 to 8 weeks.

Sometimes the end of a bone is forced out through its covering of muscle and out through the skin. Sometimes the object that causes the break will go through the skin and muscle until it reaches the bone. Such breaks as these are called compound fractures and are the very worst kind because of the danger of dirt being carried into the wound when the break is being reduced (set).

Months are often required for compound fractures to mend, and often it is with great difficulty that the injured arm or leg is saved.

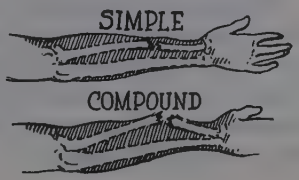
A simple fracture may be converted into a compound fracture by careless or improper handling. The broken bone usually has sharp saw-tooth ends, and just a slight twist may push it through the skin. The chief purpose of First Aid for fractures is to prevent a simple fracture from becoming a compound fracture.

Indications of Simple Fracture—One or more of the following symptoms may be present:

Patient may have heard or felt bone break.

Pain at point of break.

Tenderness as the fingers are passed over the break.



The limb often looks deformed when compared with uninjured limb.

Controlled movement of the part is limited or completely lost.

Swelling, often very great, begins in a few minutes.

Shock is usually present in some degree and may be very severe.

First Aid for Simple Fracture—*Things to do and not to do:*

Treat for shock. Send for a doctor or ambulance.

Do not attempt to set the bone.

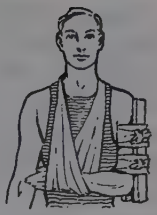
If patient is not to be moved, do not apply splint until seen by a doctor. Keep him warm and make him as comfortable as possible.

Never move the patient if it can be avoided, and then only after the bone has been splinted.

First Aid for Compound Fractures—If the compound fracture is in the arm or leg, place a loose tourniquet between the break and the heart, in order to be prepared in case the artery starts to bleed as a result of a puncture from the broken bone. If artery is spurting, attend to it at once, with finger pressure first, and then a tourniquet.

If the broken bone is protruding, apply an antiseptic over wound and bone, then a sterile dressing, and then if absolutely necessary to move, a well padded splint. Arrange the splint padding in such a way that it will not press on the wound and does not cover tourniquet —remove it at those points if necessary. The First Aider must never attempt to press or draw the bone back into the wound.

Fracture of Forearm and Wrist—Use two well padded splints, one at the back and one at the front of arm and wrist. The fingers should be 4 or 5 inches higher than the elbow. The thumb is always up. A folded newspaper may be used very satisfactorily as an emergency splint.

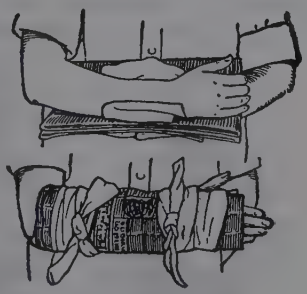


Fracture of the Upper Arm — Two padded splints are used as shown in the illustration, narrow sling should be used; then bind the upper arm to the body with a wide cravat bandage.

What are Splints?—Splints are used for broken and suspected broken bones to prevent them from moving at the point of fracture, and at the nearest joint. They must be of stiff material. Improvised splints may be made from pieces of wood, broom sticks, pick or shovel handles, laths, heavy cardboard, canes, umbrellas, straw in bundles, corn-stalks, folded newspapers, etc.

In making a splint always remember that, besides being firm and stiff, it should be long enough to extend beyond joints on either side of the fracture and, if possible, it should be as wide as the thickness of the limb to which it is applied. Splints must be well padded with some soft material on the inner side and at the ends that come in contact with the body.

Padding may be made from cotton or wool batting, folded clothing, pillows or blankets, or from long grass, or wheat or rye straw and from many other materials. A sterile dressing must of course protect any skin break from contact with the padding.



Folded newspaper used as emergency splint

Folded pillow used as splint

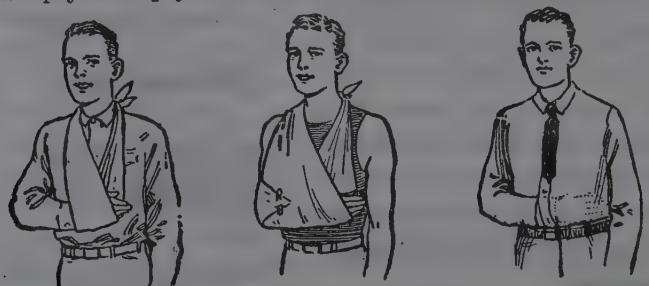
"Splint Them Where They Lie"—The muscles of the legs and the arms are so strong that they are likely to pull the ends of broken bones into the flesh that surrounds them unless traction (pull) is applied to keep the ends apart.

A Real First Aid Problem—To move the seriously injured person or not to move him—that's a most serious question.

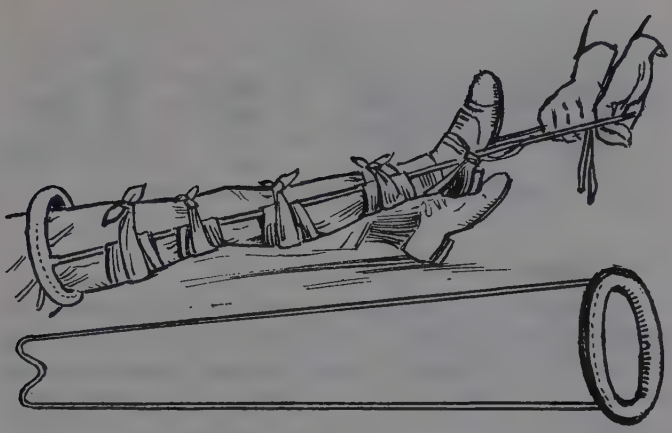
The gathering crowd will demand action. "Why doncha put him in a car and take him to the hospital?" Mob sympathy often influences individual good judgment and that very human sympathy may cost a leg or break a back, or jam a broken rib through a lung.

A safe rule when a doctor can be brought to the case, is to send for him, keep your man warm as comfortable as possible, and wait. Remember that often a smile and a cheery word is the best aid that can be given.

If you are back yonder where two people in ten miles are a crowd, then study and plan the job as an engineer would study and plan the moving of a building. The injured person's life, very likely, will depend on your ability. A slide and a fall, and your man may resemble Humpty-Dumpty. Plan well and execute better.



Arm sling—The hand should be a little higher than the elbow



This is a Thomas Traction Splint

Always if possible to do so, a Thomas or similar type of traction splint should be applied before the injured person is moved if arm or leg is broken. Nearly all ambulances carry such a splint as part of their regular equipment. If, when calling a doctor, it is known or suspected that an arm or leg is broken tell the doctor, and ask that a traction splint be brought.

The rule "Splint them where they lie" should be followed in every such case.

(16) Fracture of Collar Bone

Apply the usual sling as shown. The fingers should be higher than the elbow. Then tie a wide cravat snugly around the injured arm above the elbow binding it to the body; this binder must not be tight enough to stop circulation in the arm. Watch the fingers; if they are blue loosen the cravat slightly.

Emergency Support for Sprained Ankle

(17) Sprains

A sprain is a wrenching, stretching or tearing of ligaments surrounding a joint (most common at ankle or wrist). Indication—Pain, stiffness, swelling and discoloration (turns black and blue). If in doubt treat for fracture.

First Aid for Sprains —Elevate the joint to relieve the pressure and pain. Apply cloths wrung out of very cold water—this should be kept up for some hours. Shock may be present. A doctor should be called. If forced to use the sprained member, tight bandaging is necessary, but great care must be taken to loosen the bandage if the pressure becomes so great, due to swelling, as to restrict circulation. Avoid walking if possible, but if it is necessary, leave the shoe on the foot and support with a binder made of a Scout Neckerchief or triangular bandage folded as a cravat. If the foot is bare when the injury occurs, it may be supported temporarily until treated by a doctor, with a rolled bandage.

(18) Transporting Injured Persons

Proper transportation of the injured person is a very important part of First Aid. A good piece of First Aid may be completely undone by improper transportation. Head injuries, fractured skulls, broken backs and fractures of the lower limbs are often made much worse by improper handling.

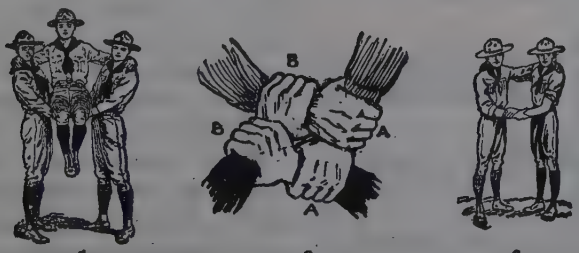
Frequently an injured person is "jack-knifed" into the rear seat of an automobile and driven at breakneck speed to a hospital without any effort to find out how seriously he is injured, with no attempt to give any First Aid, and with no regard whatever for the kind of injury he has received. Too many of them are crippled for life or killed outright by such senseless methods.

A severely injured person should always be carried on a stretcher. Persons with head injuries and fractures of the skull, spine, pelvis, thigh or leg should be moved only in a lying position. And then only on doctor's orders and with his direction,—except in very unusual circumstances.

Do not be hurried into moving a patient. Very few cases require breakneck speed. Necessary First Aid should always be given and any tight clothing loosened before the patient is moved. Except when the patient's face is red, he should be covered with a blanket or other suitable covering to keep warm during transportation.

Four-hand Carry—A patient who is conscious and has no broken bones may be carried by two bearers forming a four-hand seat. The patient will assist considerably if he will put an arm around each bearer's neck.

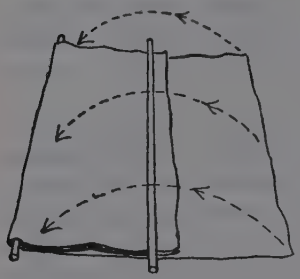
Two bearers can also carry a patient using arms as shown in figure 3.



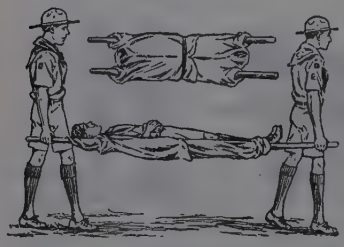
1 2 3

Four Hand Seat

Litter Improvised from a Blanket



Improvised Stretcher—Blanket and Poles



Two Coats—Two Poles

Improvised Stretchers—The ordinary stretcher known as the army stretcher is the most satisfactory for general use if it is available. Usually however, a stretcher has to be improvised and the following methods are satisfactory:

1. Place the patient in the center of a blanket, rug, or robe. Roll the edges in towards the patient as shown in the illustration. Have 3 or 4 bearers on each side. In lifting, all kneel on the knee nearest the patient's feet. At the command "lift," all rise to standing position, keeping the arms straight at the elbow, do a quarter turn towards the patient's feet and walk off with a short slow step, all keeping together.

2. Where poles are available, a blanket, robe, or rug may be used as shown, or Scouts' coats or shirts may be pulled over poles as shown in the illustration. Two burlap bags will make a good stretcher. Make holes in each corner of the closed ends and slide them over two poles.

The patient is carried feet first unless going up a steep grade. When the bearers of a stretcher with poles are not very strong it may be advisable to use four bearers—one at each end of each pole.

Transportation Without a Stretcher—Frequently it is necessary to carry an injured person and no stretcher can be secured. Any of the following methods may be used, although the use of eight (six) bearers will be better if the strength of the bearers is not great.

Eight (Six) Bearer Carry —Eight bearers are usually used although six will do if they are strong and the patient is light. They will take their positions four on each side, kneeling on the knee next to the patient's feet. The two at the head interlock the fingers of one hand to form a cup under the patient's head. All the other hands are gently worked under the patient—those under the body just past the spine —those under the thighs and legs go almost all the way across. At the command "lift," they carefully arise, keeping the patient level, and lifting him on the hands and forearms. A side-step is best used for carrying a short distance. At the command "lower," the patient is lowered in an exact reverse of the way he is raised.

"Pack-Strap Carry" —The patient's arms are brought over the bearer's shoulders from the back and crossed in front of the bearer's chest. Care must be taken that the bearer's shoulders are well up in the armpits of the patient.

Chair Used As Stretcher—This is particularly good for carrying a patient up or down narrow stairs where a stretcher cannot be used. The patient is seated in a strong straight chair which has been tested. Two bearers are used—one at the patient's head and the other at the feet—both facing the patient. The chair is tipped back by the bearer at the patient's head. The bearer at the feet grasps the front legs if the chair is suf-

ficiently strong—the back legs if there is doubt about the strength of the front legs. In going up or down the stairs the bearers should have one shoulder rubbing against the wall; this aids greatly in keeping their balance. The patient will of course be carried head first going upstairs, and feet first coming down.

Three Man Carry—The three bearers take position at the side of the patient, always opposite any serious injury that may be present. A fourth man to assist on the side opposite the middle bearer is advisable, if he can be secured. The bearers kneel on the knee next to the patient's feet.

Their arms are placed well under the patient's head, shoulders, back, hips, and legs.

When all are ready, at the command "lift," the patient is lifted to the knees of the three bearers and rested there. The bearers now make sure they have a secure hold. At the command "rise," they stand up slowly with the patient in their arms, rolling him towards them so that the front of his body is against their chests.

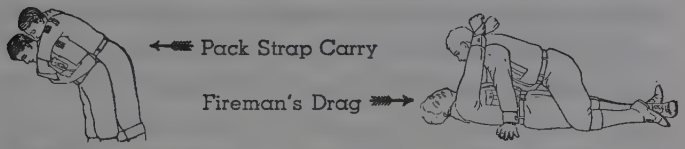
The bearers can then move forward, or side-stepping if necessary, to carry the patient through a narrow door.

To place the patient on a stretcher, he is lifted to the bearer's knees in the same manner. The stretcher is then slid into position by the fourth man. At the command "lower," the patient is gently lowered from the knees. The patient should be kept level at all times.

Four Men Lift

Fireman's Drag—Used for removing persons from a smoke filled room.

Lying flat beside the person to be rescued who has been rolled on his back, the rescuer ties the hands as shown, with a handkerchief, belt, or piece of cloth. The rescuer then straddling the victim, places his head beneath the tied hands and crawls away, dragging the victim along the floor beneath him. This keeps both victim and rescuer below the thickest of the smoke.



EMERGENCY SERVICE CORPS

The Emergency Service Corps of the Boy Scouts of America is, to define it in a sentence, "Scouting's contribution to community defense against the destructive effects of disaster."

What Can It Do?

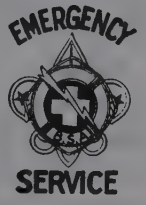
It will serve as an auxiliary arm to the American Red Cross and local government organizations (police, fire departments, and National Guard).

What Has It Done?

For more than twenty-five years, Boy Scouts have been active in every major and almost every minor disaster that has occurred in continental United States or its insular possessions.

The Qualifications

Scouts over fifteen years of age and active in the Troop, who have parental consent, are physically fit, hold certain pertinent Merit Badges and can pass certain ability tests, are eligible. Complete details may be secured from your local Scout Executive.



Requirement No. 7

"Prepare and cook satisfactorily, in the open, using camp cooking utensils, at least one of each of the following three classes of food, as may be directed: (1) Eggs and bacon, hunter's stew, fish, fowl or game; (2) pancakes, corn-bread, biscuit or "twist," baked on a stick; (3) oatmeal or other hot cooked cereal. Give an exact statement of the cost of materials used and the number of persons intended to serve."

Cooking

In fire building, (Second Class Requirement No. 7) the Scout has already met several kinds of fires — now comes the time to use them.

The Scout should be able to cook as many as possible of the dishes cited. For his test he must cook palatably any three that the Examiner may direct.

Eggs

Boiled — Heat water to boiling point. Place eggs in carefully. Boil steadily for three minutes if you wish them soft. If wanted hard boiled, put them in cold water, bring to a boil, and keep it up for twenty minutes. The yolk will then be mealy and wholesome.

Fried—Melt some butter or fat in frying-pan or on piece of tin or metal; when it hisses, break and place eggs carefully. Fry them three minutes.

Scrambled—First stir the eggs up and after putting some butter in the frying-pan, stir the eggs in it after adding a little milk.

Poached—Bring a frying-pan of water to boil, break and drop in your eggs, being careful not to break yolk. Serve on toast when egg has hardened to the desired state.

Bacon

Use thin slices; remove rind if any. Some like to parboil it first, but this is not necessary. Drop slices in warm frying pan or on piece of tin or thin rock. Bacon can be fried on a sharp stick over hot coals. A "nest" of three or four slices of bacon with the egg, in the centre, and over the bacon edges is "not hard to take."

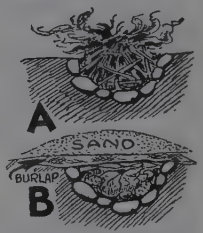
Hunter's Stew

To make a hunter's stew, chop the meat into small chunks about an inch square. Then scrape and chop up any vegetables that are easily obtained — potatoes, turnips, carrots, onions, etc.; and put them into the mess kit, adding clean water, or soup, till the mess kit is half full. Mix some flour, salt, and pepper together and rub the meat well into the mixture, then place this in the mess kit or kettle, seeing that there is just sufficient water to cover the food—and no more. The stew should be ready after simmering for about an hour and a quarter.

Fish

Clean well. Small fish should be fried whole with the back bone severed to prevent curling up; large fish should be cut into pieces, and ribs loosened from back bone so as to lie flat in pan. Rub the pieces in corn meal or powdered crumbs, thinly and evenly, fry in plenty of hot fat to a golden brown, sprinkling lightly with salt just as the color turns. If fish has not been wiped dry it will absorb too much grease. If the frying fat is not very hot when fish are put in, they will be soggy with it.

Fowl



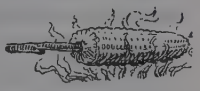
Fish, fowl, rabbits, small pigs may be cooked without utensils in a hole in the ground. A hole a foot and a half each way, and the same depth, is lined with stones—then the hole is filled with kindling and twigs and over it a criss cross two foot pile of two to three inch hardwood. In perhaps an hour the wood has burned and the hole is full of hot stones. Rapidly clean out the embers, put on a heavy layer of sweet leaves (basswood, sweet gums, wild grape, maple, sassafras or vegetable tops). Place the chicken or fish on these leaves in the centre of the hole with any potatoes, corn on the cob, close to the fish or fowl or animal—Then cover with leaves and stones spread over it with wet canvas or burlap and then cover it completely with earth. In a couple of hours this IMU is ready! Come quickly!!

Game

After game has been bled, skinned and drawn—it may be boiled, "imued," fried, or broiled.

A simple broiler can be made from a long forked green twig, or meat can be broiled on a few green sticks over a small fire or coals.

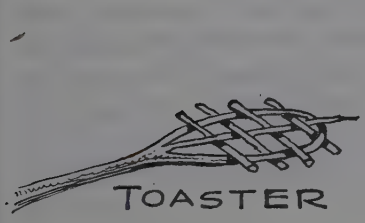
Green Sweet Corn



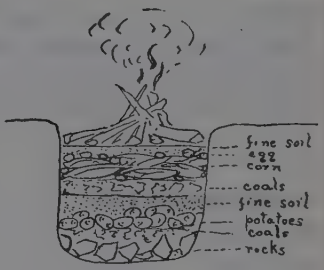
1. Roast direct on long stick over the coals.
2. Bake in ashes (like potatoes) after first cleaning out silks, then twist husks on tightly again and bury. In about an hour—come and get it! (See Page 260.)
3. Boil 30 minutes in enough salted water to cover.
4. When too hard to use as green corn, it may be grated and the grating salted and baked in little patties (old corn may be used if first soaked overnight in water).

Mutton Or Lamb Chops (Or Pork)

These can be cooked in their own grease. Rub the hot pan (or piece of tin or flat stone) with the fat of the chop and then put in and salt as it begins to turn slightly red on top. Turn and repeat salting process. Continue turning until done to suit. The juice will butter your bread. The fireplace is made as follows: With the heel make a small trench in the direction the wind is blowing, or use two small parallel sticks as shown below. Use small dry twigs and small fire.



Seneca Indian Dinner



One time a Seneca friend named Moses Shongo, one of the finest men I ever knew, told me how to prepare a big meal for a crowd with the least labor. One must dig a hole in the ground about two feet deep, line the bottom with rocks and allow a hot fire to burn in this hole for an hour. Since potatoes cook slower than corn, these are placed in the coals, covered with two inches of moist earth, and another fire built on this, which lasts perhaps half an hour. Then ears of corn with the husks on are laid as thick as possible in the coals, with eggs placed on top carefully, and covered with two inches of moist earth again. Once more a fire is built and maintained for an hour. When the coals have nearly died out the feast supply is ready to be opened. You may ask why Indians used chicken eggs, when these fowl are not native of America? But the answer is that the custom began long ago by using sea-gull eggs, also wild turkey, duck, grouse and even crow.

—*Ralph Hubbard.*

Kabob

James A. Wilder of Honolulu cut hammered flank steak into pieces about an inch in diameter and strung them on a small sharp stick perhaps alternating an onion slice—he rolled it in a bit of flour and then after searing it close to the fire he salted it and turned till ready! It's great! Try it. (See Second Class Requirement No. 8.)

Roast Potatoes

Wash and dry potatoes thoroughly, bury them deep in a good bed of coals, cover them with hot coals until well done. It will take about forty minutes for them to bake. Then pass a sharpened hardwood sliver through them from end to end, and let the steam escape and use immediately, as a roast potato soon becomes soggy and bitter.

Stale Bread

If it has not moulded can be dipped quickly in water —then put in oven to freshen, *or* may be toasted and put in hot (but not boiled) milk with a bit of butter and a pinch of salt, *or* it may be fried (French Toast) after dipping slices into eggs whipped with ½ cup milk for each egg and a little dash of salt.

Pancakes

Beat one egg, tablespoonful of sugar, one cup diluted condensed milk or new milk. Mix enough self-rising flour to make a thick cream batter. Grease the griddle with rind or slices of bacon for each batch of cakes. Be sure to have the griddle hot.

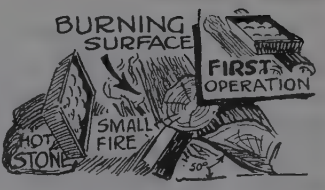
Biscuit

In general, biscuit or small cakes should be baked quickly, by a rapid or ardent heat; large loaves require a slower, more even heat, so that the outside will not harden until the inside is nearly done. For a dozen biscuits use:

1½ pints flour. ½ heaping teaspoonful salt.

1½ heaping teaspoonsful baking powder.

1 heaping tablespoon cold grease. ½ pint cold water.



The amount of water varies according to the quality of flour. Too much water makes the dough sticky and prolongs the baking. Baking powders vary in strength; the directions on the can should be followed in each case.

Mix thoroughly with a big spoon or wooden paddle, first the baking powder with the flour and then the salt. Rub into this the cold grease (which may be lard, cold pork fat or bacon drippings) until there are no lumps left and no grease adhering to bottom of the pan. This is a little tedious, but it doesn't pay to shirk it; complete stirring is necessary for success. Then stir in the water and work it with the spoon until the result is rather a stiff dough. Squeeze or mold the dough as little as possible; because the gas that makes the biscuit light is already forming and should not be pressed out. Do not use the fingers in molding; it makes biscuit "sad." Flop the mass of dough to one side of the pan, dust flour on bottom of the pan, flop dough back over it, and dust flour on top of the loaf. Now rub some flour over the bread board, flour the hands, and gently lift the loaf on the board. Flour the bottle or bit of peeled sapling which is to be used as a rolling pin, and also the edges of the can or can cover to be used as biscuit cutter. Gently roll the loaf to three quarters of an inch in thickness. Stamp out the biscuits and lay them in the pan. Roll out the culls or leftover pieces of dough and make biscuits of them, too. Bake until the front row turns brown; reverse the pan and continue until the rear row is similarly done. Ten to fifteen minutes is required in a closed oven, and somewhat longer over the camp-fire, or camp hearth, or stone oven.

"Twist" Baked On A Stick

Work the dough, prepared as for biscuit, into a ribbon two inches wide. Get a club of sweet green wood (birch, sassafras, poplar, or maple) about two feet long and three inches thick, peel the large end, and sharpen the other and stick it into the ground, leaning toward the fire. When the sap simmers wind the dough spirally around the peeled end. Turn occasionally while baking. Several sticks can be baking at once. Bread enough for one man's meal can be quickly baked in this way on a peeled stick as thick as a broomstick, holding it over fire and turning it from time to time.

Some Hints For Handling Food

Take bread and crackers with you for camp. Pack butter in small jar; cocoa, sugar, and chocolate in small cups or heavy paper; also salt and pepper. Wrap bread in a moist cloth to prevent drying up; bacon and dried or chipped beef in wax paper. Pickles can be purchased put up in small bottles. Use the empty bottle as candlestick.

Unleavened Bread

Can be made quickly and will keep almost indefinitely.

2½ pints of flour. 1 tablespoonful of sugar.
1 scant tablespoonful of salt.

Mix with water to a stiff dough and knead and pull. Roll out thin like crackers and mark into squares with knife. Use as little water as possible if you want it to "keep." A teaspoonful of lard or butter worked in with the flour is good but reduces the "keeping" qualities.

Corn Batter Bread

1 pint fresh corn meal.
2 pints milk (or water).
2 eggs.
1 teaspoonful salt.

Beat the eggs until light, add salt, then the meal and milk a little at a time until thoroughly mixed. A spoon of butter or lard will add somewhat to the flavor. Bake about half an hour. Hoecake may be made by omitting the eggs and frying the cakes on both sides, carefully cleaning and greasing the pan each time. Many prefer a thin cake with resulting crust.

Clam Bake

Build large criss-cross fire over two feet high. Distribute stones in the pile of wood. When the fire burns down, cover the hot stones with damp sea weed (not too wet)—then lay on the clams—cover the entire pile with sea weed and let them steam some twenty minutes for little necks and twice that long for round clams.

Steamed Fish

Place the large stones heated as for clam bake in a hole some two feet deep and wide enough for your fish.

Fill the hole with hot stones nearly to the top, then put on a layer of cold stones, on these lay your fish ready to cook. It may be tied to a non-resinous board which would then be turned "fish side down" or similarly protected before covering the whole thing with clay or earth.

Make a hole into the pit with a stick and pour in half a bucket of water. Close up the hole and let it steam.

Half to three-quarters of an hour will steam your fish.

Requirement No. 8

"Read a map correctly, and draw, from field notes made on the spot, an intelligible rough sketch map, indicating by their proper marks important buildings, roads, trolley lines, main landmarks, principal elevations, etc. Point out a compass direction without the help of the compass."

MAP READING AND MAP MAKING

What a Scout should know about maps.

F. E. MATTHES—U. S. Geological Survey

Certainly a Scout should be able to read the simple road maps for motorists, and also learn to understand *topographic* maps, such as are issued by the U. S. Geological Survey. Likewise Sea Scouts should be able to read the *charts* of coastal waters which are prepared by the U. S. Coast and Geodetic Survey.

Map Reading

In this age of travel, by land, water, and air, a person who cannot read a map well enough to find his way with the aid of one is at a great disadvantage.

The first thing to do is to familiarize yourself with the different symbols, or conventional signs used on maps. These are shown on two full pages in this chapter.

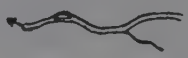
Scale—Watch for the scale, it tells whether an inch on the map represents 100 feet or 10 miles. The scale is placed usually on the lower margin in the form of a bar, or line, divided into lengths. It may be given: a. In the form of a ratio or fraction, as for instance, 1:24,000, or 1/24,000. b. In the form, 2,000 feet to the inch; two inches to the mile, etc.

SYMBOLS USED ON MAPS

Roads and houses

Canal with locks

Private and poor roads


Streams

Trails

Springs

Railroads and stations

Lake or pond

Electric RR

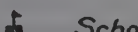
Tunnel

T T T T
Telegraph or telephone

Power line

Political boundaries

Church

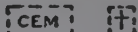

School house

SH

PO
Post Office

TO
Telegraph Office

HOS
Hospital


CEM
Cemetery

Windmill

Camp

Fences

Barbed wire

Smooth wire

Rail or worm

Board Picket

Stone wall

Hedge

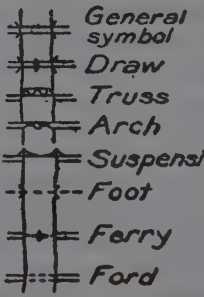
× Prospect

Mine or quarry

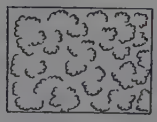
Mineshaft

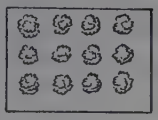
Oil well

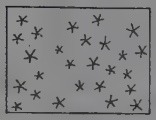
Bridges



LAND CLASSIFICATIONS


Woodland

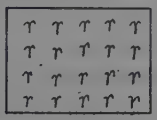

Orchard


Pine or fir

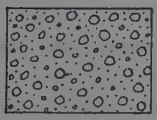
Cleared land

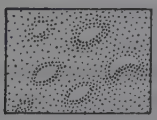
Grassland

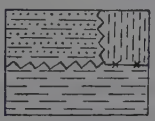
Marsh

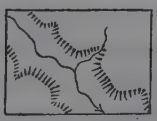

Corn

Tidal flat


Cotton


Dunes


Cultivated fields


Bluffs or cliffs

AIDS TO NAVIGATION

LSS (T)
Life saving sta. (T) telegr. conn.

LSS, CG
Life saving sta. Coast Guard

(radio) Light house

Light ships

Light ship with radio

Light ship with submarine bell and radio

RS ⊙
Radio station

RC ⊙
Radio compass sta.

RT ⊙
Radio tower

Beacon, lighted

Beacons not lighted

Buoys

red *black*

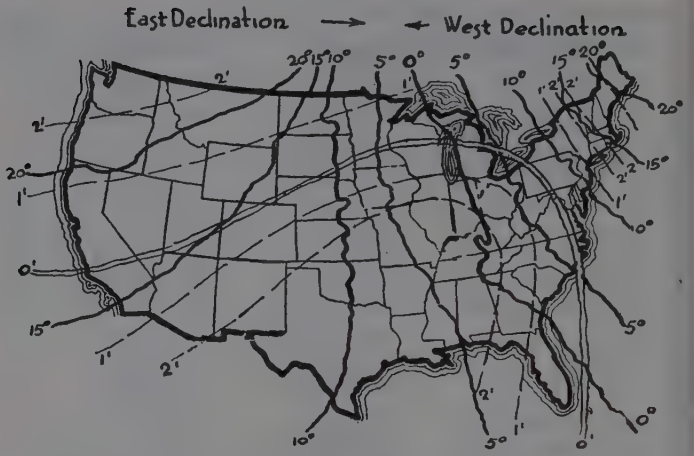


Chart of Compass Deviation

Direction Of North—On all modern maps, the direction of *true north* is shown by an arrow or a simple line.

Why, you may ask, does not the compass needle point to the true north? Because it is attracted by the *magnetic poles* of the earth, and these do not coincide with the *geographic poles,* which are the points through which the earth's axis of rotation passes and to which all the meridians converge. The *north magnetic pole* is some 1,400 miles distant from the north pole, being situated on the northern edge of Canada, near the western coast of the Boothia Peninsula. It is slowly migrating north-westward. The south magnetic pole is situated approximately the same distance from the south pole, in the Antarctic Ocean.

Because the north magnetic pole is so much nearer to us than the north pole, the compass needle points to the west of true north in the eastern parts of the United States, and to the east of true north in the western parts.

The western declination in the eastern states will increase, the eastern declination in the western states will decrease. It is thus necessary on any map to give the particular year for which the figures hold good. The annual variation (+ and =) is shown on the map of compass declination.

How To Orient A Map (Finding North)

Suppose you are lost in the woods, so badly "turned around" that you can not decide in which direction to travel in order to reach camp. There are several mountain tops in view through the trees, but you can not identify them. You carry a map of the region on which these mountains are shown, but even this map will not help you in identifying them until you can spot north. How can that be done?

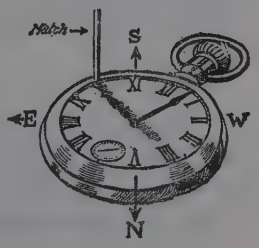
a. By Means Of A Pocket Compass—Turn the map until its magnetic north line points in the direction of the compass needle. Do not use the true north line. Remember that in many parts of the country the difference between magnetic north and true north is considerable.

b. By Means Of A Watch And The Sun — Hold the watch flat with face upward. Hold a match or small straight stick upright at the edge of the watch and at the outer end of the hour hand. Turn until the shadow of the stick falls along the hour hand—which hand will then point toward the sun—THEN

In the morning South will lie half way between the hour hand and XII (forward).

At noon South will lie directly along the hour-hand-shadow line.

In the afternoon South will also lie half way between the hour hand and XII (backward).



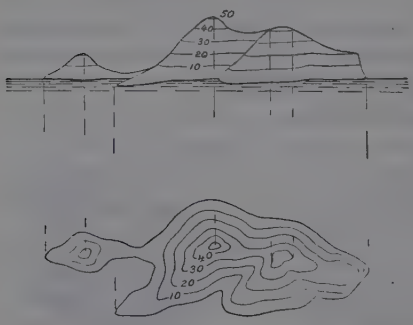
Why?—A day is 24 hours—the watch dial has but 12. From sunrise to noon the sun covers ¼ of its circle, your watch covers about ½ (6 a. m. to noon). 2 hours in the sky circle then corresponds to 1 hour on the watch circle.

The sun will give you true north, therefore orient with the true north line on the map. Remember that if your watch is set for daylight saving time, it is really one hour fast.

c. By Means Of The North Star—The north star indicates very closely, though not exactly, the true north, being situated almost in line with the axis of the earth. For that reason it is known also as the Pole Star or Polaris. You should be able to locate it without fail both by the Great Bear constellation (the Big Dipper) and by Cassiopeia. When either of these is too near the horizon to be visible, the other is high up in the sky. See pages 377 and 378.

The Meaning Of Contour Lines

Every contour line is drawn to show a definite elevation above sea level and maintains that elevation unvaryingly throughout its course. It may be regarded as an imaginary shore line. The contour interval is slated on the lower margin.



Contour of island

The spacing of the contour lines on a map shows the degree of flatness or steepness of the country at any given place. A nearly level plain is shown by contour lines spaced far apart; a gently sloping hillside, by contour lines spaced moderately close together; a steep

mountain side, by densely crowded contour lines. How would a vertical bluff or cliff look on a map?

Map Reading To Be Learned In The Field

The quickest and most interesting way to learn to read and use a map is by taking a map on a hike. Starting from a definite and readily identified point, such as a cross roads or a bridge, follow closely on the map the route traveled.

Map Making (General Plan)

A sketch map such as is required for the First Class requirement in map making should be something more than a mere free-hand drawing. In order to have practical value it should be based on a few simple measurements of distance and direction.

Distance a Scout can readily measure by pacing, and directions he can take with sufficient accuracy with a pocket compass. All he needs in the way of equipment, therefore, is a pocket compass, a pencil, a rubber eraser, a sheet of paper and, for the final plotting of compass bearings, a small protractor.

All measurements of distance or direction being subject to error, one should always recheck the work. This is done in all surveying. The best way is to make a circuit around or through the area to be mapped, ending at the starting point. Such a survey circuit, made up of successive straight courses, whose distances have been paced and whose bearings (or directions) have been determined by compass, is called a traverse circuit (pronounce trav'-erse).

Selection Of Area

It is advisable to lay the traverse circuit along country roads. It should be not less than one mile long and have at least six or eight courses. If no road circuit of

appropriate size can be found, part of the traverse may be laid across country, preferably along fences that will afford definite lines to follow. However, pacing across country is to be avoided whenever possible, as it is difficult and liable to large errors.

Always choose an area outside of a crowded city or town, for accurate work with a compass is impossible in those places owing to the disturbing influences of steel structures and electric conduits. City parks also present problems, as the drives in them are usually laid in curves, which are difficult to map.

Preliminary Training In Pacing

Before starting out to make his map a Scout should ascertain the length of his stride by pacing off a distance of 100 or 200 feet measured with a tape. He should step off with the left foot, military style, and count only strides of the right foot. Let him pace the distance three or four times without forcing his gait, then take the mean of his counts. If he averages about 20 strides in 100 feet, he takes about a 5-foot stride. As 5 is easy to multiply with, it is worth while to cultivate a 5-foot stride.

Some boys cannot possibly keep up a 5-foot stride. Let the long-legged ones try for an even 6-foot stride, and the short-legged ones for a 4½-foot stride. They should in any event make a table of strides and equivalent distances in feet, to save themselves much laborious multiplying.

Pedometers or other counting devices are not to be used.

Compass Work

Pocket compasses, indeed all compasses used in surveying and mapping, are graduated in degrees. There are always 360 degrees, but they may be arranged in

either of two ways. In the first the compass is divided into four quadrants, each of which is graduated from zero to 90 degrees. North and south are always zero points, east and west are always marked 90. On such a compass a bearing (or direction) 30 degrees east of north is read N.30°E.

On the other style of compass (known as the azimuth compass) the degrees are numbered consecutively around in clockwise direction from zero to 360. North is zero, east is 90°, south is 180°, and west is 270°. On this compass directions are read simply in degrees.

The best way to take a bearing with a pocket compass is to stand facing in the direction to be determined, compass in both hands, about breast high; then, the box having been turned until the N. is under the north end of the needle, to sight quickly over the pivot and read the degrees in the line of sight on the far side of the dial. At first a pencil laid across the crystal, in the line of sight, or held vertically on the far side of the compass, will be found helpful.

If the needle swings violently it may be calmed down by tilting the compass gently and letting one end of the needle drag for a moment. Do not expect the needle to come to rest altogether. Such reading is likely to be two to four degrees in error, but it will be accurate enough for this purpose.

Never stand on or near a railroad or car track when reading a compass, nor close to any electric power line, steel structure, automobile, bicycle, etc., for the compass needle is strongly deflected by them.

The Field Survey

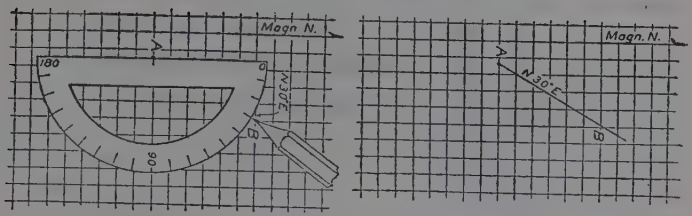
The requirements for the First Class test in map making specify that the map shall be drawn from field notes made on the spot. Jot the notes on a rough free-hand sketch map on a board or cardboard which you

draw as you proceed. Such a rough field sketch is likely to be somewhat distorted, still it will be a better guide for the drawing of the final map than any memoranda which you might write in a notebook.

Start at a cross roads, a road fork or other well defined point. Stand in the middle, look up the first straight stretch of road and take its bearings with your compass. Draw a rough sketch of the road and mark the bearing on it. Pace the distance to the first turn in the road. On the way you will pass several objects that are to be shown on the map. Mark on sketch distance paced to this point, take bearing of next stretch of road and begin a new count of paces. Locate houses and other important objects along or near road, as before. Do so for each course of the traverse circuit until you return to the starting point.

Sketch in with the proper symbols streams, telegraph and telephone lines, fences, crops, orchards, woodland (edges only), grass land, marsh land, etc. As a rule the interior of the traverse circuit can be sketched wholly by eye, but if it is largely masked by woods, you may have to run a traverse through it. In any event do not guess at it. A Scout map must be reliable.

Some houses and other important objects may be situated too far from the road to be readily located by judging, and they may be inaccessible by reason of "no trespassing" signs or watch dogs. Such houses may be located by means of two compass bearings taken to it from two points not too close together. When these bearings are later plotted on the map, their point of intersection will determine the location (see sample map). The method is quick, accurate, and saves much weary tramping. Care must be taken to have the two bearings intersect each other at a reasonably wide angle.



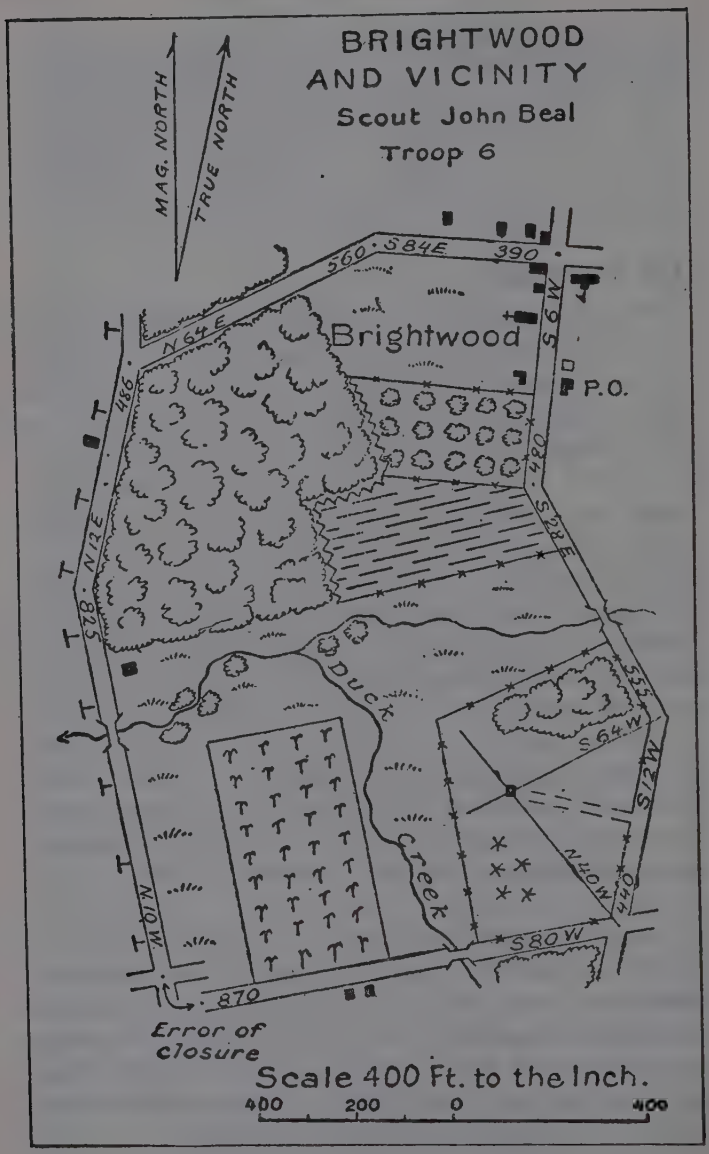
The Final Map

The final map is to be constructed at home, with the aid of a protractor and a plotting scale. It is recommended, except in certain unusual cases, that Scout maps be drawn on a standard scale of 1000 feet to the inch. Experience has shown that the pacing and compass work is too crude for a map on a larger scale, while the drafting becomes too difficult on smaller scales.

The protractor needed for the plotting of compass bearings is a half circle divided into 180 degrees. Small protractors of cardboard, celluloid, or metal, such as may be had for 10 or 15 cents at stores dealing in school supplies, answer the purpose very well.

For the plotting of bearings, it is recommended that the map be drawn on cross-ruled or "graph" paper. One set of blue lines may then serve as magnetic north lines (the entire map is to be drawn with reference to the magnetic north, it being based on compass bearings).

To plot a given bearing, such as N. 30°E. place the protractor with its center on the point from which the bearing is to be laid off, and with its straight side parallel to the nearest blue line. Then with a sharp pencil point off the proper number of degrees. Bear in mind that the straight side of the protractor must always lie north-south, never east-west.


BRIGHTWOOD
AND VICINITY
Scout John Beal
Troop 6
MAG. NORTH
TRUE NORTH
560
S84E
390
N64E
S6W
Brightwood
P.O.
486
480
S12E
S25E
DUCK
creek
S64W
S12W
N10W
440
S80W
870
Error of closure
Scale 400 Ft. to the Inch.
400
200
0
400

Plot the courses of the main traverse circuit first and defer the drafting of road lines and the plotting of houses and other objects until the main circuit is made. The main circuit probably will not close exactly. Do not try to hide it by fudging; show it just as it is. Every survey, no matter how accurate, has an error of closure. An error of 100 feet (a quarter of an inch on the scale of mapping) is not excessive. In some localities, where there is much iron in the ground, half an inch is allowable. If the error should prove to be very much larger it shows that there is a mistake somewhere. Go over the plotting first and, if you find no mistake, repeat some of the field measurements.

Draw the final map in pencil only (not in ink). Use a 4H or slightly softer pencil, well sharpened, and make firm, neat lines. Print (do not write) names of villages, roads, streams, mountains, etc. All such names must be readable from the bottom of the map. Leave all the bearings and distances on the courses of the main circuit so that the examiner may check them. Likewise the bearings taken to distant houses.

Do not undertake to show hills and valleys by means of contour lines, but show bold features, such as lines of bluffs and cliffs, by means of hachures. An example is given at bottom of page 267.

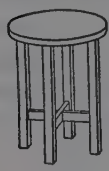
The Final Touches—In an upper corner of the map print a title describing the locality. Under it print your name, Troop number, and date of survey.

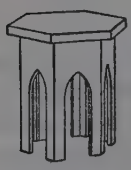
Draw a neat, strong line ending in a half-arrow to show the direction of magnetic north. Label it. Mag. North. Plot the direction of true north in accordance with the magnetic declination of your locality.

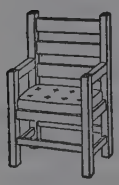
At the foot of the map draw a bar scale.

Requirement No. 9

"Use properly an axe for felling or trimming light timber; or produce an article of carpentry, cabinet-making, or metal work made by himself; or demonstrate repair of a decaying or damaged tree. Explain the method followed."







In meeting this requirement, no live trees should be used, only dead timber.

It has also been suggested that where a dead tree is cut, a Scout should plant some trees—a fine thought.

Or some article of handicraft may be made either of wood or metal.

It is recommended that this be some article of actual usefulness about the home, or Troop meeting place, or school, or camp.

For ideas consult your Manual Training Department in school or BOYS' LIFE or Dan Beard's books. See Public Librarian.

The article submitted should be in finished form.

"Or demonstrate repair of a decaying or damaged tree."

A decaying tree was first a damaged tree. Trees not only need food and water and cultivation to avoid smothering but they need protection against infection.

Tree Wounds

A tree wound closely resembles a human skin or flesh wound. The same problems are present.

(1) The Wound Should Be Quickly Cleaned And Covered—with the torn bark and with grafting wax to prevent drying out; or cow dung and clay plastered over it, or shellac and paint.

(2) The Wound Must Be Disinfected—as with corrosive sublimate (2 oz. to 15 gal.); copper sulphate (1 oz. to 1 gal.); Formalin (1 oz. to 2 gal.); creosote; carbolic acid; gasoline; kerosene; lime, sulphur wash, etc.

(3) Use A Dressing To Keep Out Enemies And Water—The dressing should stick to the wood, should weather well and should be easy to apply. Any of the following may be used: Plastic cement, used by slaters; grafting wax, for temporary use; coal tar; asphalt compounds; white lead and linseed paint.

Most of these need repeated application to keep a surface impervious to insects and water.

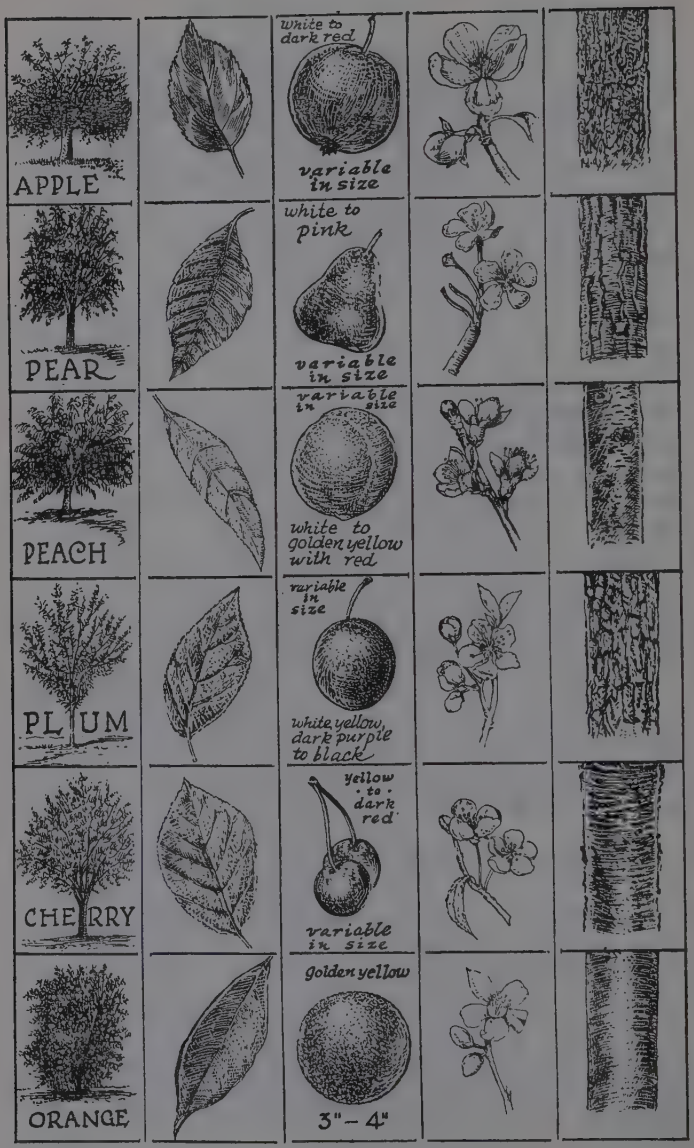
The edges of the dressing must come just below the cambium layer to enable it, "skin-like," to heal over.

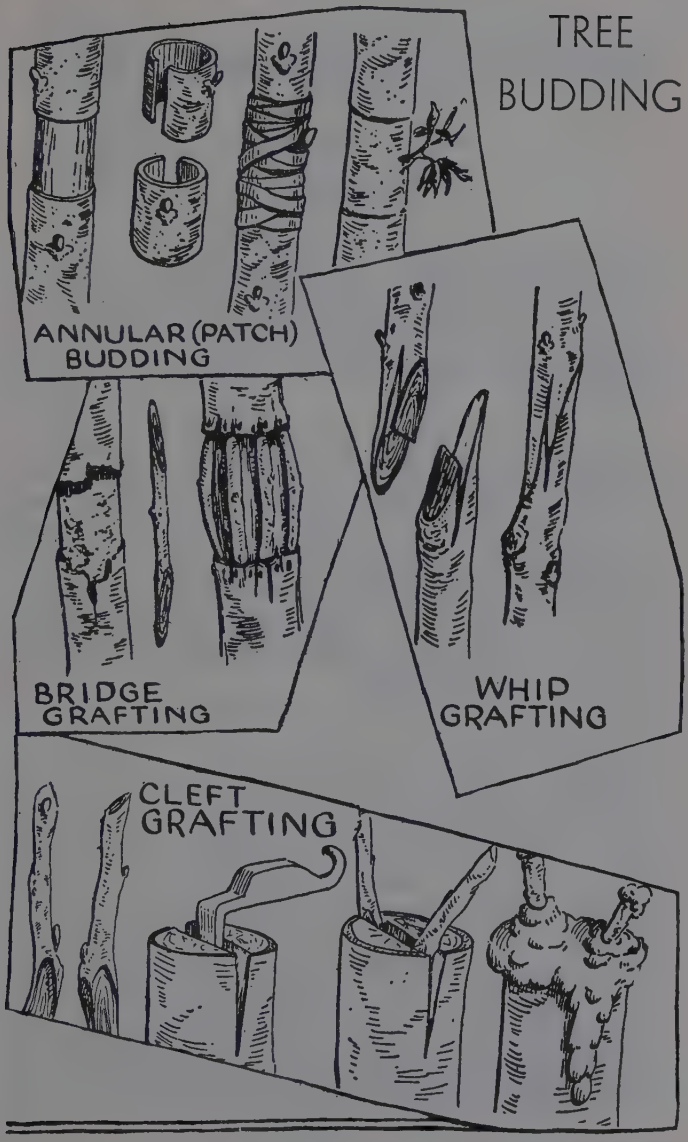
Fillings—Tree cavities should have the decayed material cleaned out; should then be disinfected thoroughly and be filled with rich cement mixture or asphaltum. Then the surface should be shaped to enable the bark to grow over it, as suggested above.

Bracings—Where trees have weak crotches, bolts and turnbuckles can be used to strengthen.

Trimming—Decay can be avoided if broken limbs or dead limbs are cut off close to body of tree and then properly treated as any wound.

The U. S. Department of Agriculture at Washington, D. C., will provide bulletins and advice. Farmer's Bulletin 1178, Sept., 1920, gives excellent counsel. The Davey Tree Surgeons of Kent, Ohio, will also answer questions.


APPLE
white to dark red
variable in size
PEAR
white to pink
variable in size
PEACH
variable in size
white to golden yellow with red
PLUM
variable in size
white, yellow, dark purple to black
CHERRY
yellow to dark red
variable in size
ORANGE
golden yellow
3"–4"


TREE
BUDDING
ANNULAR (PATCH)
BUDDING
BRIDGE
GRAFTING
WHIP
GRAFTING
CLEFT
GRAFTING

Requirement No. 10

"Judge distance, size, number, height and weight within 25 per cent."

JUDGING

Many people are poor judges of distance or size. A Scout needs to be able to do these things because sometimes in an emergency a short rope or a board on the ice which is too short may mean the loss of life. Many automobile accidents are due to faulty judgment of distance.

One's Own Distances

In judging distances, the Scout should know and use *his* height, *his* reach, *his* finger length, *his* pace, etc. These serve as *units* for him.

Practice judging distance. Look at a distance, estimate it, then pace it or measure it. This practice can be done by Patrols as a competition, can be played as a game and "Keep score."

Judging Distance

Every Scout should know to an inch what is his usual pace when walking and running. Judging short distances should be practiced first, and then the lengths gradually extended. Begin by judging objects twenty yards away; then increase the distance ten yards at a time until any space a hundred yards in length or so can be estimated. It must be remembered that the distance is judged from the eye to the object without taking into account the contour of the intervening ground. The following points adapted from "Scouting for Boys," by Baden-Powell, should be consistently kept in mind and studied in judging distances:

The range of objects is usually overestimated:

1. When kneeling or lying.
2. When the background and the object are of similar color.
3. On broken ground.
4. In avenues, long streets, or ravines.
5. When the object is in the shade.
6. In mist or failing light, or when heat is rising from the ground.
7. When the object is partly seen

Points to be noted. The range of objects is usually underestimated:

1. When the sun is behind the observer.
2. When the atmosphere is clear.
3. When the background and the object are of different colors.
4. When the ground is level or covered with snow.
5. When looking over water or a deep chasm.
6. When looking upward or downward.

It is further worth noting in relation to distance:

At 50 yards the mouth and eyes of a man can be clearly seen.
At 100 yards the eyes appear as points.
At 200 yards buttons and any bright ornament can be seen.
At 300 yards the face can be seen.
At 400 yards the movement of legs can be seen.
At 500 yards the color of clothes can be seen.

Scouts should practice constantly such games as: Shop Window, Kim's Game, Morgan's Game, Far and Near, in order to become expert in estimating. Handling solids will improve the ability to tell at a glance the comparative weights of different objects. Only practice and comparisons will develop ability to make accurate judgments.

Judging Height

(1) Knowing your own height and upward reach. (2) Practice estimating heights of other people. Your own height and that of other people are visible units for use in estimating other heights. (3) How tall is that building. It has four stories—you need to know something of the average height of ceiling, etc.

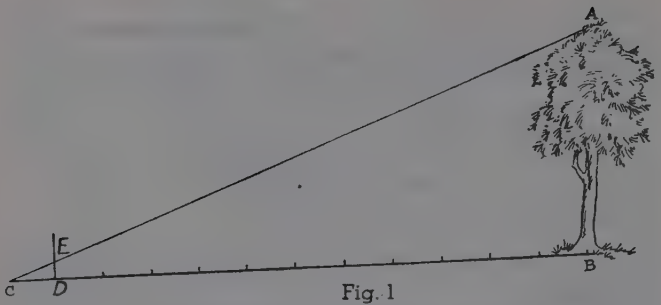


Fig. 1

Measuring Heights And Distances — FREDERICK K. VREELAND, *Camp Fire Club of America,* has outlined certain practical methods for measuring inaccessible objects.

To measure the height of a tree or flag pole, a Scout Staff may be used. If A, B, Fig. 1, is a tree, measure off on the ground a distance twelve times the length of the staff, and mark the point C by driving a stake. Then measure off from C one staff length toward the base of the tree, and drive the staff in the ground, at D. Place the eye close to the ground at C, having the staff exactly in line with the tree, and note where the line to the top of the tree cuts the staff. We will call this E. The distance from D, to E, measured on the staff in inches, will be equal to the height of the tree in feet.

If the ground is not level, or if the eye is not close to the ground, the distance from E to D should be measured to the point where a line to the base of the tree cuts the staff, and not all the way to the ground.

The reason of this is simple. The triangles A B C and E D C have exactly the same shape, but one is bigger than the other. Since the distance B C is twelve times the distance D C, the height of the tree A B must be twelve times the distance measured on the staff E D, hence every inch on the staff is equal to a foot on the tree.

Of course if it is not convenient to measure just twelve pole lengths from the tree, any other distance may be used, but in that case you will have to calculate the height from the proportion:

$$\text{Lines } \frac{E\,D}{D\,C} = \frac{A\,B}{B\,C} \text{ or } A\,B = \frac{E\,D \times B\,C}{D\,C}$$

Every Scout should also know the length of his reach, that is, the distance from his eye to an article, such as a stick or lead pencil, held at arm's length. This can be made useful in a number of ways. For example, instead of using the Scout Staff to measure the height of a tree you can use a sighting stick or ruler held upright in the hand. Hold the stick as shown in Fig. 2 so it covers the tree with the top A of the stick in line with the top A of the tree. Mark with the thumb the point B, in line with the base B of the tree, and measure its distance from the end of the stick. If the distance of the tree in feet is ten times the length of one's reach in inches, then the height of the tree in feet will be ten times the height measured on the sighting stick in inches. For example, if the length of one's reach is 24 inches and the distance of the tree is ten times 24 feet, or 240 feet, then if the height measured on your sighting stick is 5 inches, the height of the tree will be $10 \times 5 = 50$ feet.

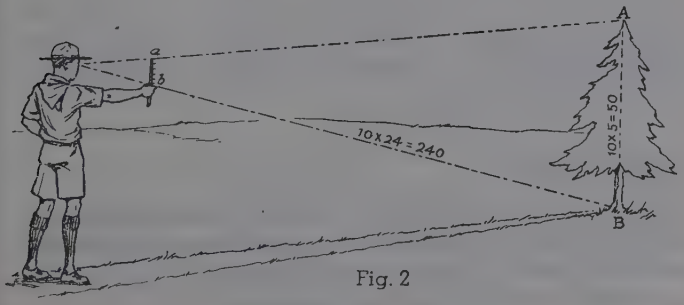


Fig. 2

The sighting stick may be used also for measuring distances by simply working backward, if one knows the size of any object at the distant point. Suppose, for example, a Scout wants to know how far away another Scout is. Hold a sighting stick at arm's length and measure off the height of the Scout on the stick. Then the distance is found by the rule:

$$\text{distance} = \frac{\text{height of object} \times \text{length of reach}}{\text{height on stick}}$$

If the height on the stick be 1 inch, the distance in feet of a Scout 5 feet tall will be five times the length of your reach in inches. If your reach is 24 inches, the distance will be 120 feet. If the height on the sighting stick is only one-half an inch the distance will be twice this, or 240 feet, etc.

It is a good plan to carry a sighting stick divided to suit the length of your reach.

By two separate observations from two stations, the distance between two inaccessible points can be computed.

Judging Number

In determining the number of objects in any group a certain amount of practice is necessary. This is frequently done by estimating for a small area and then thinking of multiples of that. How many people in the church? So many to a seat—so many seats—this can be rather quickly done.

Judging Weight

In determining weight, one must constantly guard against the illusion of size. A small piece of iron may be much heavier than a large block of wood. Here again skill comes from "Keeping at it."

Requirement No. 11 (1a)

Be able to identify in the field (1a) ten species of trees or plants, including poison ivy, noting such characteristic things as bark, leaves, flowers, fruit, and scent.

NOTE: *Where there are technical impossibilities, with reference to a, b, and c, only those characteristics are required that are possible of observation.*

TREES

I think that I shall never see
A poem as lovely as a tree.
A tree whose hungry mouth is pressed
Against the earth's sweet flowing breast;
A tree that looks at God all day,
And lifts her leafy arms to pray;
A tree that may in summer wear
A nest of robins in her hair;
Upon whose bosom snow has lain;
Who intimately lives with rain.
Poems are made by fools like me,
But only God can make a tree.

JOYCE KILMER, *in "Poetry."*

TREES

This section on trees approved by the United States Forest Service.

EDITORIAL NOTE:—In addition to Mr. Sudworth, the Editor is indebted to The American Green Cross of Los Angeles, and The American Museum of Natural History of New York City—for materials used in preparing the following tree pages. The following books were used for reference: Field Book of American Trees and Shrubs.

—F. Schuyler Mathews. (G. P. Putnam's Sons)

Handbook of The Trees.

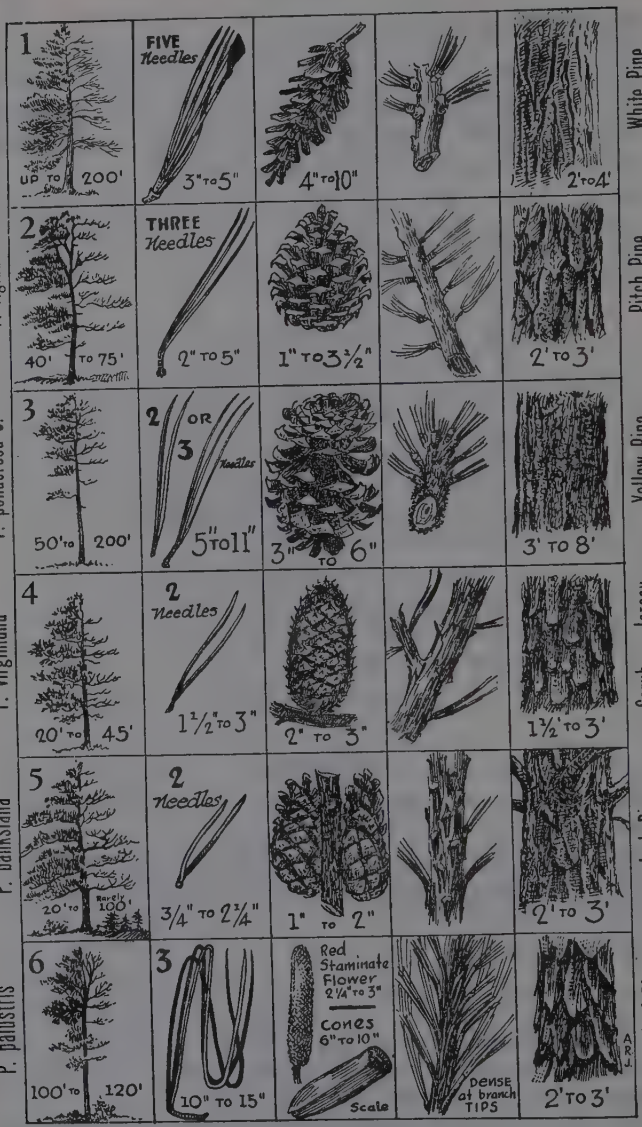
—Romeyn Beck Hough. (R. B. Hough Pub. Co.)

Forest Trees of the Pacific Slope.

—G. B. Sudworth. (Government Printing Office.)

Know The Trees—To know the trees of your neighborhood is great fun and is not difficult. It is part of the woodcraft of every outdoorsman.

In the following pages are descriptions of 126 trees.


Pinus strobus
1
UP TO 200'
FIVE Needles
3" TO 5"
4" TO 10"
2' TO 4'
White Pine
P. rigida
2
40' TO 75'
THREE Needles
2" TO 5"
1" TO 3½"
2' TO 3'
Pitch Pine
P. ponderosa s.
3
50' TO 200'
2 OR 3 Needles
5" TO 11"
3" TO 6"
3' TO 8'
Yellow Pine
P. virginiana
4
20' TO 45'
2 Needles
1½" TO 3"
2" TO 3"
1½' TO 3'
Scrub or Jersey
P. banksiana
5
20' TO 100'
2 Needles
¾" TO 2¾"
1" TO 2"
2' TO 3'
Jack Pine
P. palustris
6
100' TO 120'
3
10" TO 15"
Red Staminate Flower 2¼" TO 3"
Cones 6" TO 10"
Scale
DENSE at branch TIPS
A R L
2' TO 3'
Longleaf Pine

1. White Pine

Flowers in late spring. Empty cones fall 2nd winter. Chief source finishing lumber in past. Pale buff yellow wood — soft, durable. Weighs 24 lbs. to cu. ft. when dry.

2. Pitch Pine

Cones ripen 2nd autumn, often hang for several years. Wood—coarse, resinous, light, soft, chiefly used for fuel, lumber and charcoal. Seasoned, 32 lbs. to cu. ft.

3. Western Yellow Pine

One of most valuable lumber trees. Trees reach age of 350-500 years. Wood moderately hard, strong, light. Color from pale to reddish yellow. Used for general construction and trim.

4. Scrub or Jersey Pine

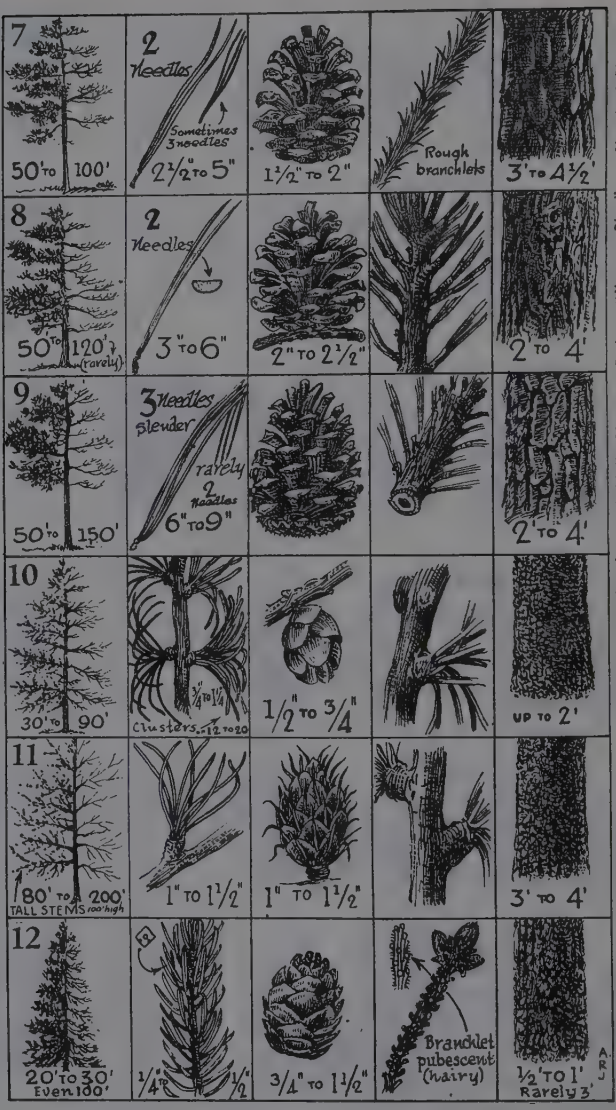
Found as high as 3,000 ft. altitude. Wood—yellow ocher color, hard, weak. Much used for fuel, paper pulp, charcoal, fencing, and rough lumber.

5. Jack Pine

Scales of the young cones end in minute incurved prickles. Old cones sometimes hang on 10 years. Wood, reddish or yellowish brown, weighs 30 lbs. per cu. ft.

6. Longleaf Pine

Chief source of resin and turpentine. Most valuable pine for building purposes, flooring and dimension timbers. Grain coarse, hard, tough, durable, weighing nearly twice as much as No. 1.


7
50' to 100'
Pinus echinata
2 Needles
Sometimes 3 needles
2½" to 5"
1½" to 2"
Rough branchlets
3' to 4½'
Shortleaf Pine
8
50' to 120' (rarely)
P. resinosa
2 Needles
3" to 6"
2" to 2½"
2' to 4'
Red or "Norway Pine"
9
50' to 150'
P taeda
3 Needles slender
rarely 2 Needles
6" to 9"
2' to 4'
Loblolly Pine
10
30' to 90'
Larix laricina
Clusters of 12 to 20
¾" to 1¼"
½" to ¾"
up to 2'
Tamarack or East'n Larch
11
80' to 200' TALL STEMS 100' high
L. occidentalis
1" to 1½"
1" to 1½"
3' to 4'
Western Larch
12
20' to 30' Even 100'
Picea mariana
¼" ½"
¾" to 1½"
Branchlet pubescent (hairy)
½' to 1' Rarely 3'
Black Spruce

7. Shortleaf Pine

Next in usefulness to Longleaf Pine. Used for interior finish and flooring. An upland tree; wood—hard, coarse-grained. 36 lbs. to cu. ft. Also called Yellow or No. Carolina Pine.

8. Red or Norway Pine

Found in relatively small scattered groves. An upland tree. Bark, reddish brown. Wood—close grained, strong, hard. Used for spars, piling, sills. Weight 34 lbs. to cu. ft.

9. Loblolly Pine

Cones grow laterally on branch and hang on through second season. Yields coarse-grained, extensively used lumber, called yellow pine. 50% heavier than white pine.

10. Tamarack or Eastern Larch

Tree of swampy lands. The leaves fall. Used for railroad ties, telegraph poles, fence posts. Wood lasts well in ground.

11. Western Larch

Growth relatively slow. Trees are 500 to 600 years old; wood twice as heavy as white pine. Used for interior finish, and construction lumber. Durable.

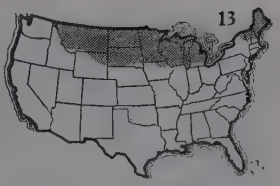
12. Black Spruce

Wood used for paper pulp. Also in construction, pilings, posts, and ships. Spruce gum is collected in winter. Weighs 28 lbs. to cu. ft.

Picea glauca	13	30' TO 150'	½" TO 1"	1½" TO 2"		3' TO 4'	White Spruce
Picea pungens	14	25' TO 150'	½" TO 1⅓"	2½" TO 4"		2' TO 3'	Colorado Blue Spruce
Tsuga canadensis	15	60' TO 70' occasionally 100'	⅓" TO ⅔"	½" TO ¾"		2' TO 4'	Hemlock
Tsuga heterophylla	16	125' TO 160' AT TIMES UP TO 200'	½" and over	¾" TO 1"		2' TO 8'	Western Hemlock
Pseudotsuga taxifolia	17	up to 250'	¾" or more	2" TO 4"		8' TO 12'	Douglas Fir
Abies balsamea	18	40' TO 75'	½" TO ¾"	2" TO 4"		1 TO 2½	Balsam Fir

13. White Spruce

Grows only in very cold climate. Foliage has unpleasant odor when crushed. Wood—light, soft, straight-grained. Used for general construction, also for paper pulp.



14. Colorado Blue Spruce

Widely planted for ornament. Silver and pale blue in color. Needles have sharp odor and are needle-pointed. Wood is soft, close-grained, not strong. Used for musical sounding boards.

15. Eastern Hemlock

Tsuga is Japanese for Hemlock. In late spring new growth shows light yellow green color. Wood splinters easily; used for rough timbers. Bark for tanning.

16. Western Hemlock

This is the giant hemlock, reaching height of 200 feet. Wood of very excellent quality, extensively used for construction and finishing lumber. Hemlocks also found in Japan, China and Himalayas.

17. Douglas Fir

Cones distinguished by long three-pointed bracts. Wood — yellow. Used for ties and pilings, construction and interior finish.

18. Balsam Fir

Wood light, soft, perishable. Usually ground into pulp. Needles very aromatic. "Canada balsam" from this tree used medically and in the arts.

19	Taxodium distichum	50' TO 150' "KNEES"	½" TO ¾"	about 1" diam.	Staminate Flower Buds	4' TO 5'	rarely 12'	Bald Cypress
20	Sequoia washingtoniana	275' OCC. 320'	Scalelike Leaves	1" TO 3"		17' TO 24' AND OVER		Big Tree or Giant Sequoia
21	Sequoia sempervirens	190' TO 340'	⅓" TO ¾"	CONE: Similar To The Above		10' TO 20'		Redwood
22	Thuya occidentalis	20' TO 60'	about ⅛"	⅓" TO ½"		2' TO 4'		Arbor Vitae Cedar
23	Juniperus virginiana	25' TO 90'	Scalelike 1/16" & 1/4" TO 3/4"	dark blue about ¼" diam.		2' TO 5'		Red Cedar
24	Juglans nigra	50' TO 150'	LEAFLET 1' TO 2' 11 TO 23 leaflets	1⅓" TO 3"		3' TO 8'		Black Walnut

19. Bald Cypress

Slow growing tree; 20 inch tree in 200 years. Wood — light, soft, straight-grained, easily worked, durable. Makes beautiful panels.

20. Big Tree—Giant Sequoia

World's oldest trees, 4-5000 years. Also largest cone-bearing tree. Measures 250 to 300 ft. high. No branches for first 100 feet. At ground base much larger than 24 ft.

21. Redwood

Trees 19, 20, 21 remnants of ancient Arctic species. Redwood of great commercial value. Age limit about 1,400. Sprouts readily from old stumps, World's tallest in California, 364 ft. high.

22. Arborvitae or White Cedar

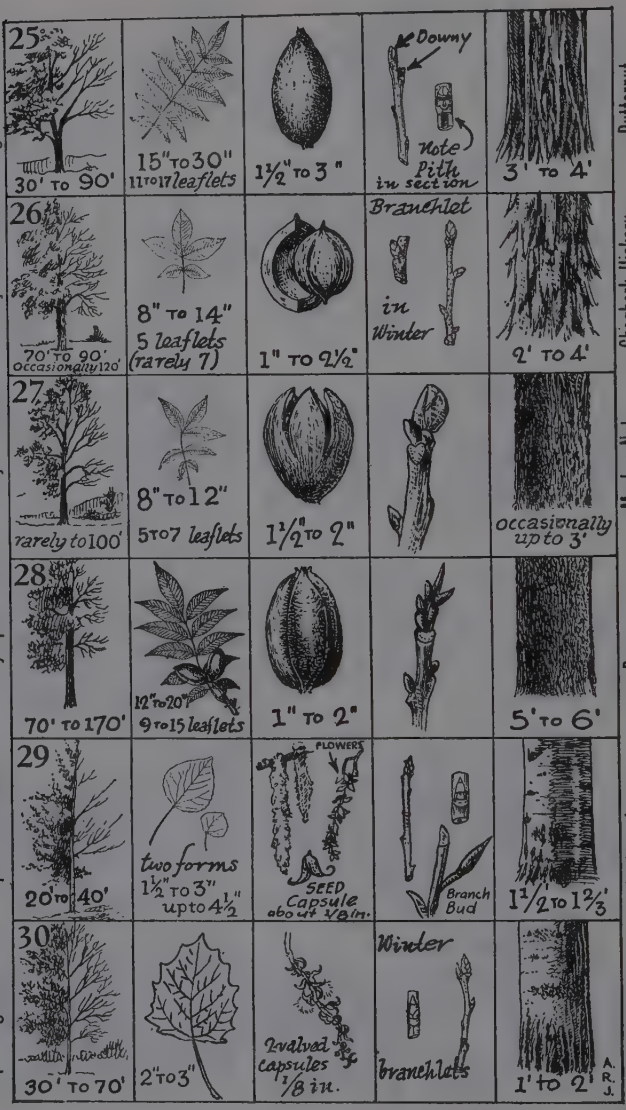
Foliage scale-like, arranged on twigs. Widely used for landscaping. Wood used for poles, fencing, posts, shingles and tub-staves; very durable.

23. Red Cedar

Sapwood, white; heartwood, rose-red color. Is used for cedar chests to protect from moths. Formerly used extensively for lead pencils and fence-posts; very durable.

24. Black Walnut

80 years required to grow commercial tree. Natural forest almost exterminated; now planted on farms. Useful for turning, gun stocks, ship building, interior finish, and furniture. Wood, deep brown in color. Nut edible.


Juglans cinerea
25
30' to 90'
15" to 30"
11 to 17 leaflets
1½" to 3"
Downy
Pith
Note in section
3' to 4'
Butternut
Carya ovata
26
70' to 90'
occasionally 120'
8" to 14"
5 leaflets
(rarely 7)
1" to 2½"
Branchlet
in Winter
2' to 4'
Shagbark Hickory
Carya alba
27
rarely to 100'
8" to 12"
5 to 7 leaflets
1½" to 2"
occasionally up to 3'
Mocker Nut
Carya pecan
28
70' to 170'
12" to 20"
9 to 15 leaflets
1" to 2"
5' to 6'
Pecan
Populus tremuloides
29
20' to 40'
two forms
1½" to 3"
up to 4½"
FLOWERS
SEED Capsule
about ⅛ in.
Branch Bud
1½ to 1⅔'
Quaking Aspen
Populus grandidentata
30
30' to 70'
2" to 3"
2-valved capsules ⅛ in.
Winter
branchlets
1' to 2'
A. R. J.
Large-toothed Aspen

25. Butternut

Nut is edible. Wood valuable and highly prized for interior finish and furniture. Green husks of nut used to make yellow dye. Weight 27 lbs. per cu. ft. Sap rich in sugar.

26. Shagbark Hickory

Blooms in May. Ripe in October. Wood—hard, heavy, tough. Used for making of farm implements, tool handles, baskets, fuel, wagon-making. Nut edible.

27. Mocker Nut

Nut not so well flavored as 26. Wood used commercially as shagbark hickory. Weight over 50 lbs. to the cu. ft.

28. Pecan

Flowers April to May, fruits September to October. Cultivated in South as far as Texas for its edible nuts. Weight 45 lbs. to cu. ft. Good fuel. Used in agricultural implements.

29. Quaking Aspen

Leaves so thin and flat that any breeze moves them. Used to make paper pulp and excelsior. Weight 25 lbs. to cu. ft. Wood not strong. Western variety (*pop. tremaurea*) up to 100 ft. high, 3 ft. diameter.

30. Large-toothed Aspen

Bark slightly more buff than the gray color of 29. Wood used for same purposes as 29. Weight 27 lbs. to cu. ft. Seeds scatter easily and grow rapidly.

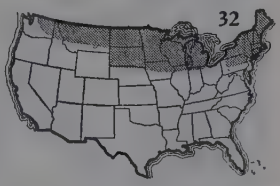
31
70' TO 160'
Dark Green
3" TO 7"
about 6"
2 TO 4-valved Capsules
Angular
6' TO 8'
Populus deltoides
Cottonwood
32
60' TO 70'
2" TO 3"
1½"
3' TO 4'
Betula papyrifera
Canoe or White Birch
33
20' TO 30'
2" TO 3½"
¾"
NOTE
black triangles
8" TO 18"
B. populifolia
Gray Birch
34
80' TO 90'
1½" TO 3"
1" TO 1½"
4' TO 5'
B. nigra
Red or River Birch
35
70' TO 80'
2½" TO 5"
1" TO 1½
2 TO 5'
B. lenta
Sweet or Cherry Birch
36
UP TO 30'
3" TO 5"
5/8" long
5" TO 6" (6+)
A. R. J.
Alnus maritima
Maritime Alder

31. Cottonwood

One of the largest poplars. Wood is light and soft; used for household wooden-ware, boxes, paper pulp; tendency to warp. Weight 28 lbs. to cu. ft.

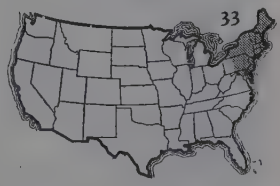
32. Canoe or Paper Birch

Wood is hard, close-grained; used for spools, shoe-pegs, and lasts, paper pulp and fuel. Bark is tough, of many layers, used by Indians for canoes, baskets, etc.



33. Gray Birch

Found on rocky hillsides, sprouts easily from stump again. Wood soft, not durable. Used for spools, pulp, hoops, fuel. Weight 35 lbs. to cu. ft. Grows rapidly in burnt over areas.



34. Red or River Birch

Usually branches 6-8 ft. above ground. Bark is thin and curls with age. Wood light brown color, used for furniture, turning woodenware. Same weight as No. 33.

35. Sweet Birch, Cherry Birch

Bark dark slate-gray, brown on younger trees. A substitute for oil of wintergreen is made from bark and twigs. Wood used for furniture.

36. Maritime Alder

Late flowering shrub, sometimes 30 ft. high. Branchlets light brown and smooth. Flowers in September; fruits the following year. Weight 31 lbs. to cu. ft.

37
45' to 100'
3" to 6"
3/4"
2' to 4'
Fagus ferruginea
Beech
38
50' to 120'
6" to 9"
2" diam.
3/4" to 1"
6' to 12'
Castanea dentata
Chestnut
39
80' to 120'
4" to 9"
3/4"
3' to 4'+
Quercus alba
White Oak
40
40' to 170'
6" to 12"
1/2" to 2"
6' to 7"
Q. macrocarpa
Burr Oak
41
40' to 100'
5" to 7"
1" to 1 1/2
3' to 6'
Q. montana
Chestnut Oak
42
50' to 140'
5" to 9
3/4" to 1 1/2"
2' to 6'
Q. borealis maxima
Red Oak
A. L. R.

37. Beech

Bark very smooth, light gray with darker patches. Wood is hard, close-grained. Used for chairs, woodenware, shoe lasts. Edible nuts, ripe in September and October.

---

38. Chestnut

Edible nuts ripe in September, October. Bears in 5th year. By 15th year valuable for timber. Wood light, soft, durable. Used for furniture, interior finish, picture frames, ties, fence-posts, telegraph poles.

---

39. White Oak

Commercially one of the most valuable trees. Wood strong, heavy, hard, close-grained. Useful alike inside or outside. Weighs 48 lbs. to cu. ft.

---

40. Burr Oak

Bark ashen gray. Used commercially like white oak. Weight 45 lbs. to cu. ft. Valued for ship building, furniture, etc. Is often confused with white oak.

---

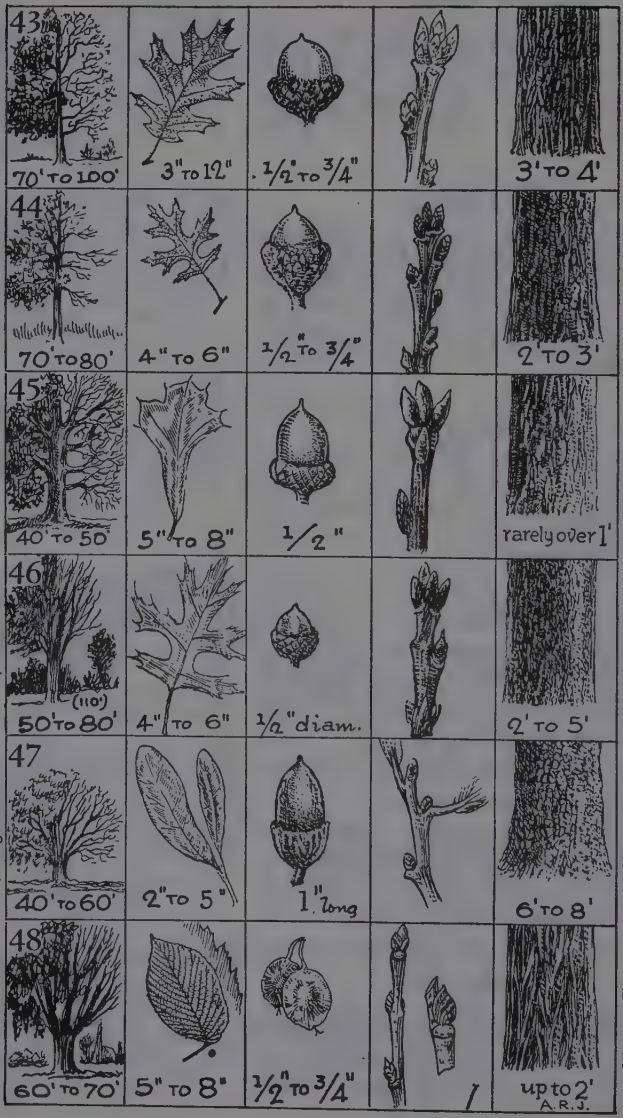
41. Chestnut Oak

Bark rich in tannin. Wood deep brown in color. Same weight as No. 40. Used for ties, fencing and fuel. Grows to great age—several centuries. 46 lbs. to cu. ft.

---

42. Red Oak

Acorns mature the second year. Wood close-grained but much used for the same purposes as No. 39. Used for heavier construction; weighs 44 lbs. to cu. ft.


43
70' TO 100'
3" TO 12"
1/2" TO 3/4"
3' TO 4'
Quercus velutina
Black Oak
44
70' TO 80'
4" TO 6"
1/2" TO 3/4"
2' TO 3'
Q. coccinea
Scarlet Oak
45
40' TO 50'
5" TO 8"
1/2"
rarely over 1'
Q. marilandica
Black Jack Oak
46
(110')
50' TO 80'
4" TO 6"
1/2" diam.
2' TO 5'
Q. palustris
Pin Oak
47
40' TO 60'
2" TO 5"
1" long
6' TO 8'
Q. virginiana
Live Oak
48
60' TO 70'
5" TO 8"
1/2" TO 3/4"
up to 2'
A.R.J.
Ulmus fulva
Slippery Elm

43. Black Oak

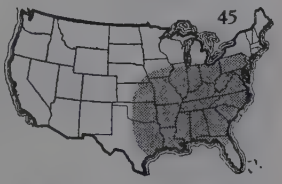
Leaves deep green above, light green below with bristle tipped points. Wood light brown, heavy (43 lbs. to cu. ft.), used for construction and barrels, yellow dye made from bark.

44. Scarlet Oak

May grow 170 ft. high. The wood is similar to that of the BLACK OAK. Chiefly used for fuel (47 lbs. per cu. ft.)

45. Black Jack Oak

Branches generally drooping. Wood heavy (46 lbs. per cu. ft.), strong, dark brown. Used chiefly for fuel and charcoal making.



46. Pin Oak

Limbs slender and drooping, with tiny branchlets, hence name. Commercially not very valuable. Used in rough construction and interior decorating. Weight 43 lbs. to cu. ft.

47. Live Oak

An evergreen. Heaviest of the oak, 60 lbs, to cu. ft. Very hard, turns edge of tools when dry. Takes fine polish. Once much used in ship-building. Attains great size with age.

48. Slippery Elm

Wood heavy, hard, durable. Used for fence posts, wheel hubs, building sills and ribs of small boats. 37 lbs. to cu. ft. Inner bark valuable.

49
50' TO 120'
4" TO 6"
1/2" TO 3/4"
4' TO 10'
Ulmus americana
American or White Elm
50
50' TO 90'
7" TO 10"
3"
3' TO 4'
Magnolia acuminata
Cucumbertree
51
50' TO 190'
3" TO 7"
2" TO 3"
8' TO 10'
Liriodendron tulipifera
Tulip or Yellow Poplar
52
80' TO 90'
3" TO 7"
Varying forms
1/4" TO 1/3"
4' TO 6'
Sassafras officinale
Sassafras
53
100' TO 140'
3" TO 5"
1" TO 1 1/2"
4' TO 5'
Liquidambar styraciflua
Sweetgum or Redgum
54
150' TO 175'
4" TO 9" WIDE
1" TO 1 1/4"
5' TO 11'
A.R.J.
Platanus occidentalis
Sycamore

49. American or White Elm

Insect pests are threatening elms. Wood used for wheel hubs, saddle trees, barrels, ship building. 35 lbs. to cu. ft.

50. Cucumbertree

Greenish tulip-shaped flowers in late May. Cucumber-like fruit, green then crimson. Seeds orange red. Wood light, close-grained. Used for water pipes, cabinets.

51. Tulip Tree or Yellow Poplar

Flowers mottled with orange and tulip-shaped. Wood soft and light, easily worked. Does not warp easily. Commercially very valuable.

52. Sassafras

Different shaped leaves occur on same tree. Grows quickly. Called "smelling stick" by Indians. Used for fencing, barrels, boat building. Young root has pleasant taste.

53. Sweetgum or Redgum

Hard, heavy (34 lbs. to cu. ft.), used for outside finish of houses and extensively for furniture. Sap used in chewing gum and for catarrhal trouble.

54. Sycamore

Bark brown with light patches. Ball-like fruit hangs on in winter. Wood checks badly. Used for cigar boxes, ox yokes, furniture, occasionally interior finish, planking.

55
40' to 80'
6" to 8" WIDE
Stem 5' to 10' Long With Several balls
2' to 3'
Platanus racemosa
California Sycamore
56
3' to 35'
Less Teeth
varying margin
2" to 6"
WAX COVERED
crowded clusters
1/8" diam
6" to 14"
Myrica Californica
Calif Wax-myrtle
57
20'
125'
3" to 6"
5/16" to 7/16"
1' to 5'
Arbutus menziesii
Madrono
58
30' to 40'
Pairs of Stipules at leaf base
3" to 6"
Capsules 1/8"
1 1/2"
3' to 4'
Salix nigra
Black Willow
59
Generally 5' to 6' also 60' to 70'
2" to 6"
1 1/2" to 2 1/2"
Up to 2 feet
Salix interior
Sand-bar Willow
60
50'
to 60'
3" to 6"
1"
3' to 5'
A.R.J.
S. babylonica
Weeping Willow

55. California Sycamore

Bark brown at bottom, white at top. Varying with conditions, some 86 years are needed to grow to a 20 inch trunk. Wood similar to No. 54 weighing about 35 lbs. to cu. ft.

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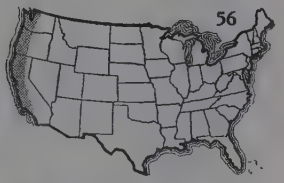
56. California Wax-myrtle

Berries purple-black, covered with white wax. Trunk dark gray, branches ashen gray. Found mostly on coastal sand dunes. Wax may be cast into candles.



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57. Madrono

The sketch shows the blossom. The red fruit "berries," are ½ inch diameter with a pebbled surface.

---

58. Black Willow

Like other willows, staminate and pistillate catkins borne on separate trees. Wood of no commercial value. Bark rich in tannin, medicinal properties for fevers.

---

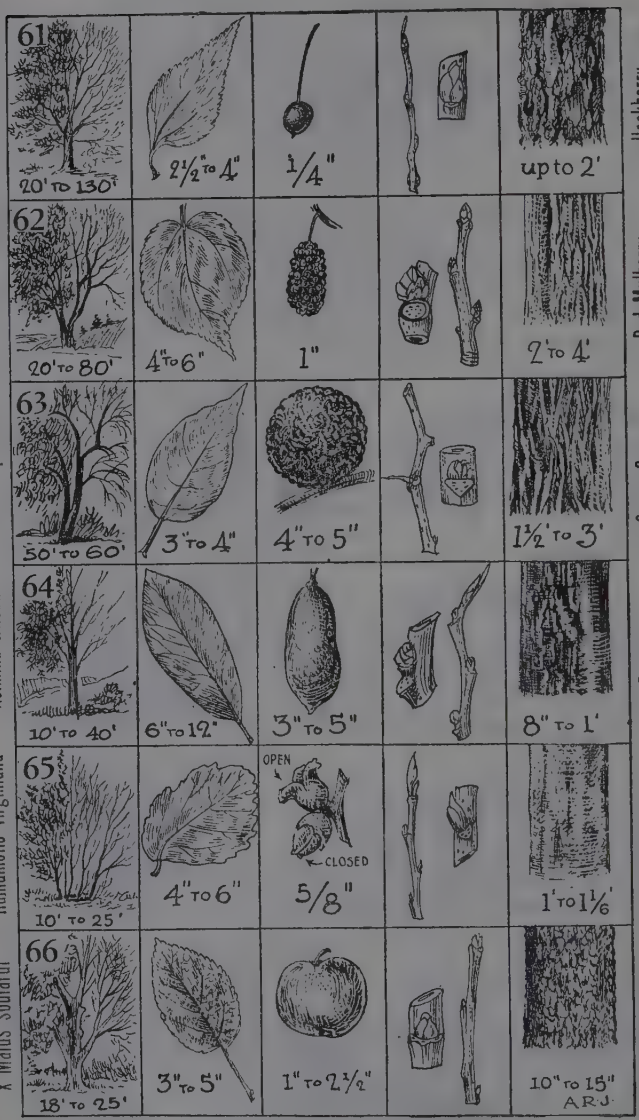
59. Sand-bar Willow

Shrub or small tree forms dense thickets on alluvial soil or river sand bars. Weight 30 lbs. to cu. ft. Has little value. Wood is very soft.

---

60. Weeping Willow

Originally imported from Europe, now spreading naturally through the drifting of detached branchlets. Has little value other than for its beauty which is unusual.


61
20' TO 130'
2½" TO 4"
1/4"
up to 2'
Celtis occidentalis
Hackberry
62
20' TO 80'
4" TO 6"
1"
2' TO 4'
Morus rubra
Red Mulberry
63
50' TO 60'
3" TO 4"
4" TO 5"
1½' TO 3'
Maclura pomifera
Osage Orange
64
10' TO 40'
6" TO 12"
3" TO 5"
8" TO 1'
Asimina triloba
Pawpaw
65
10' TO 25'
4" TO 6"
OPEN
CLOSED
5/8"
1' TO 1⅙'
Hamamelis virginiana
Witch Hazel
66
18' TO 25'
3" TO 5"
1" TO 2½"
10" TO 15"
A.R.J.
x Malus soulardi
Crab Apple

61. Hackberry

Fruit cherry-like, edible, at first ochre yellow, finally purple black. Wood heavy (37 lbs. to cu. ft.), soft. Some commercial value for rough lumber.

---

62. Red Mulberry

Widely cultivated. Planted in southern states for fruit, eaten by pigs and poultry. Fruit sweet and juicy. Wood used in boat building, for fences, etc.; is durable.

---

63. Osage Orange

While a south-western tree, it has been widely planted for hedges. Wood excellent for bows. Strong, heavy (38 lbs. to cu. ft.), and produces a yellow dye.

---

64. Pawpaw

Tree has an unpleasant odor when leaves or branches are crushed. Fruit edible in October, especially after frost. Wood, light, of no economic value.

---

65. Witch Hazel

From its bark and twigs a valuable distillate is made. When seed pods burst, in the second season, the 4 seeds are "shot" 15 to 45 feet away.

---

66. Crab Apple

While the one illustrated is a cultivated variety, the crab apples occur wild in most sections. Belong to the rose family. Fruit usually fragrant but sour; small trees.

67	Sorbus Americana	Mountain Ash	30' to 40'	Leaflet COMPOUND 9–17 leaflets 6" to 8"	3" to 5" across cluster 1/4" diam.	8" to 15"
68	Amelanchier canadensis	Service berry or Shad bush	30' to 40'	2" to 3½"	1/4" to 1/2"	1' to 1½'
69	Crataegus calpodendron	Pear Hawthorn	18' to 20'	3" to 5"	1/2"	5" to 10"
70	Prunus pennsylvanica	Pin Cherry	30' to 40'	1" to 5"	3/16"	4" to 15"
71	Cercis canadensis	Redbud or Judas Tree	40' to 50'	3" to 5"	SMALL, FLAT SEEDS IN POD 3/4" diam. 2½ to 3½	10" to 12"
72	Gymnocladus dioicus	Kentucky Coffeetree	to 100'	Leaflet 10 to 14 COMPOUND 24" to 36"	3/4" SEED diam. 4" to 10"	2' to 4' A.R.J.

67. Mountain Ash

White clustered flowers in May-June. Fruit red or scarlet, hangs into winter. Wood close grained, weighs 34 lbs. to cu. ft. Of no commercial value.

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68. Service berry or Shad bush

Bark gray with brown stripes. Fruit an edible berry, crimson at first then dark purple. Ripe in June. Wood hard, heavy (52 lbs. to cu. ft.), used for tool handles, fishing rods, etc.

---

69. Pear Hawthorn

Bears spines which are about 1½ inches long. Fruit red and edible. Has no economic value. Tree small.

---

70. Pin Cherry

Fruit very sour but eaten by birds. Light brown wood is soft and of no economic value. Grows up rapidly in burnt over areas.

---

71. Redbud or Judas Tree

The red flowers precede the leaves. Cultivated as ornamental tree. Wood not used commercially; is hard, heavy (42 lbs. to cu. ft.).

---

72. Kentucky Coffeetree

Spreading naturally from cultivation. Wood is soft, strong, close-grained, lasts well (43 lbs. to cu. ft.). Used for posts also in cabinet making. Flowers sweetly fragrant.

73	Gleditsia triacanthos	COMPOUND WITH 18-28 Leaflets	seed 10" to 18"		2' to 6'	Honeylocust
74	Rhus hirta	11 to 31 leaflets	drupes or seeds ⅛"		12" to 15"	Staghorn Sumach
75	Ilex opaca		Nutlets RED		2' to 3'	American Holly
76	Acer saccharum					Sugar Maple
77	Acer rubrum					Red Maple
78	Acer negundo	3 leaflets				Boxelder or Ash-Leaved Maple

75' to 140' | 7" to 10" | 10" to 18" | 2' to 6'

35' to 40' | 12" to 24" | 6" high | 12" to 15"

40' to 50' | 2" to 3" | ¼" to 5/16" | 2' to 3'

50' to 110' | 2" to 5" | 1" | 3" to 5"

40' to 100' | 2" to 6" | ½" to 1" on stems 3" to 4" | 2' to 4'

40' to 75' | 4" to 9" also 5 | 1½" to 2" | 2' to 4'

73. Honeylocust

Found oftener in cultivation than wild. Wood durable as posts, wheel hubs and rough construction (42 lbs. to cu. ft.). A quick grower.

---

74. Staghorn Sumach

If cut in spring a sticky, milky sap flows. Wood beautifully grained, greenish in color. Used in souvenir manufacture and small cabinet work.

---

75. American Holly

Leaves evergreen, prickly. Fruit persists through winter. Branches widely used for Christmas decorations. Wood used in cabinet making and interior finish.

---

76. Sugar Maple

Greenish yellow flowers appear with the leaves. The sugar tree. One tree can yield 5 lbs. sugar. Wood heavy (43 lbs. to cu. ft.), used for flooring, cabinet work.

---

77. Red Maple

Red in spring, twigs red in summer, leaves red in autumn. Wood widely used for chairs, woodenware, turning (38 lbs. to cu. ft.). Sap yields sugar.

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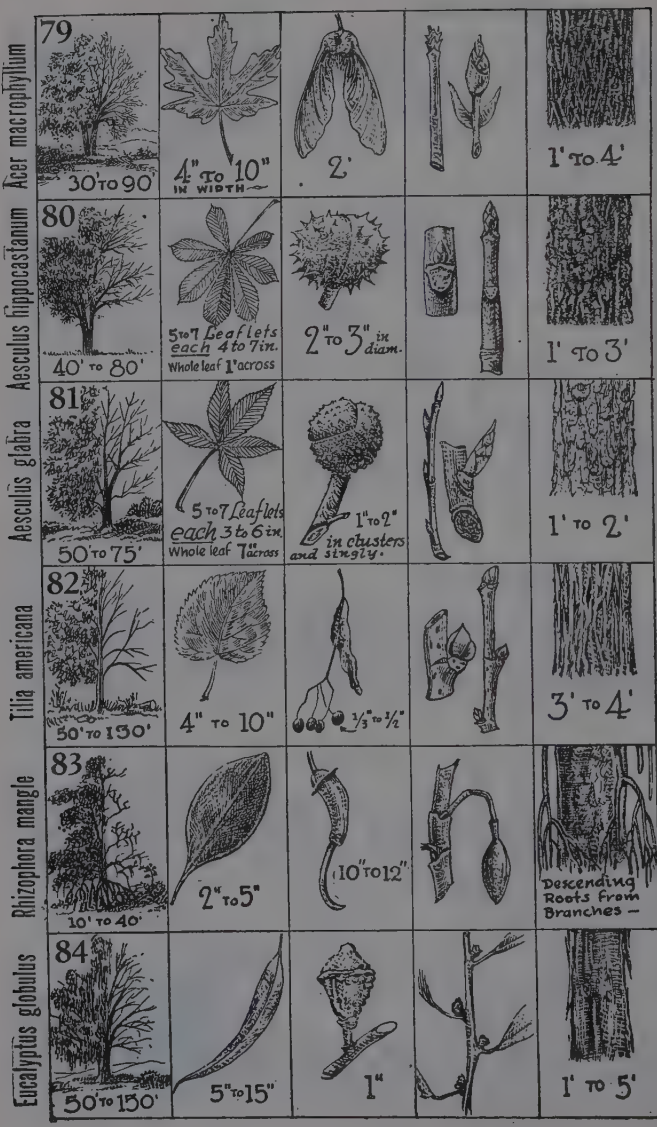
78. Boxelder or Ash-leaved Maple

Sap can be made into sugar. Wood is light (27 lbs. to cu. ft.). Used for furniture, interior finish, barrels and for paper pulp.


79
30' TO 90'
4" TO 10" IN WIDTH
2'
1' TO 4'
Acer macrophyllum
Bigleaf Maple
80
40' TO 80'
5 TO 7 Leaflets each 4 to 7 in.
Whole leaf 1' across
2" TO 3" in diam.
1' TO 3'
Aesculus hippocastanum
Horse Chestnut
81
50' TO 75'
5 TO 7 Leaflets each 3 to 6 in.
Whole leaf 7" across
1" TO 2" in clusters and singly.
1' TO 2'
Aesculus glabra
Ohio Buckeye
82
50' TO 130'
4" TO 10"
1/3" TO 1/2"
3' TO 4'
Tilia americana
Basswood
83
10' TO 40'
2" TO 5"
10" TO 12"
Descending Roots from Branches
Rhizophora mangle
Mangrove
84
50' TO 150'
5" TO 15"
1"
1' TO 5'
Eucalyptus globulus
Eucalyptus

79. Bigleaf Maple

Extensively cultivated. The hard close-grained wood is used for tool handles, furniture, trim and flooring. A native of California, though grows elsewhere.

---

80. Horse Chestnut

Native from Greece to Himalaya Mountains. Cultivated widely. Not edible. Wood used by European wood carvers and turners. Weight 28 lbs. per cu. ft.

---

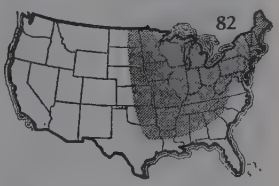
81. Ohio Buckeye

Pod contains two nuts. Not edible. Soft wood not of much economic value. Used for small woodenware, artificial limbs, paper pulp.

---

82. Basswood or Linden

The inner bark is used for mat fibre. Wood is used for carriages, furniture, woodenware and pulp.



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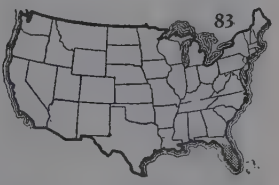
83. Mangrove

A coastal Florida tree. Is called the "land-builder." A single tree may spread with new roots like a giant fence.



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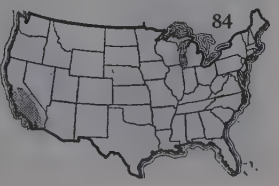
84. Eucalyptus or Bluegum

Native of Australia. Grows also in Florida. Leaves, leathery in texture. Produces fragrant oil with medicinal properties. Wood, strong and durable—used in ship-building and construction.



85
12' to 40'
3" to 6"
½" in length EACH
6' to 14'
Cornus florida
Flowering Dogwood
86
20' to 100'
2" to 5"
½"
3' to 5'
Nyssa sylvatica
Blackgum
87
50' to 60' 100' to 130' Sometimes
3" to 7"
1" to 1½"
1¼' to 2'
Diospyros virginiana
Persimmon
88
60' to 120'
8" to 15" with 5 to 11 leaflets
1" to 2"
4' to 6'
Fraxinus americana
White Ash
89
60' to 70'
8" to 12" with 5 to 9 leaflets
Samara
1" to 2"
2" to 3"
F lanceolata
Green Ash
90
3' to 50'
3" to 7"
¾"
6" to 2'
A.R.J.
Cephalanthus occidentalis
Button-bush or B. willow
A.R.J.

85. Flowering Dogwood

Flowers — four bracted cream-white to pink. Ovoid fruit deep scarlet. Heavy, hard wood. Minor uses, such as shuttles, mallets, pulleys, rules, etc.

---

86. Black Tupelo or Blackgum

Flowers green — fruit, purple-black. Wood no special commercial value. Used for wheel hubs, ox-yokes, house-movers' rolling blocks, fruit crates.

---

87. Persimmon

Pistillate and staminate flowers on separate trees. Fruit edible when fully ripe and frosted. Wood heavy (50 lbs. to cu. ft.). Takes fine polish. Used for bench screws, mallets, wagon shafts, lasts, etc.

---

88. White Ash

Pistillate and staminate flowers on separate trees. Next to the oak, this is one of most important trees commercially. Used for agricultural implements, wagons, furniture, oars. (41 lbs. to cu. ft.).

---

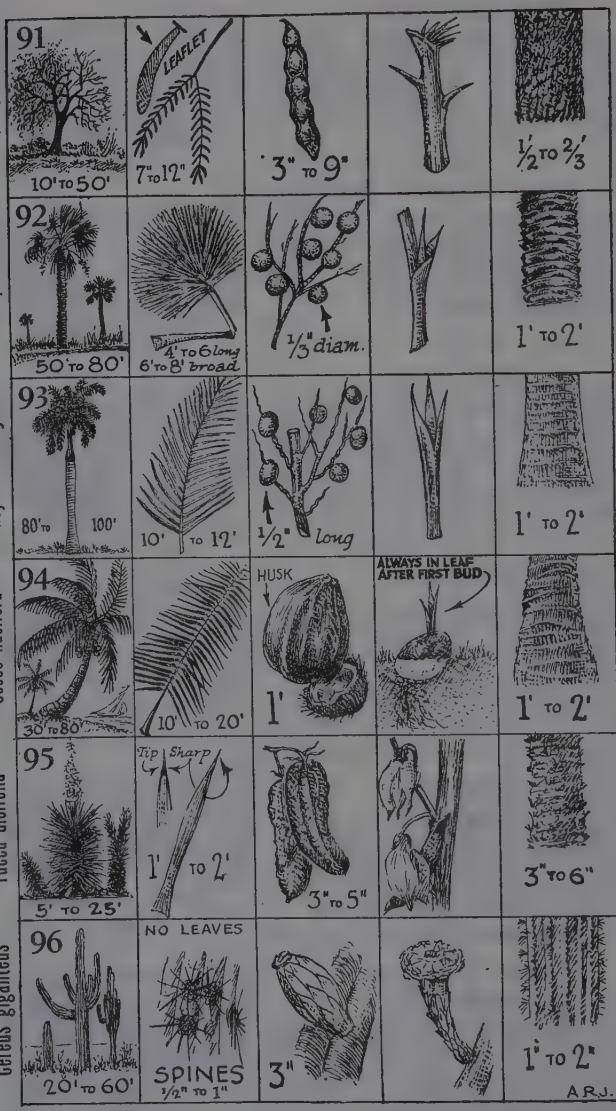
89. Green Ash

Leaf and twigs very smooth. Along streams and in moist lowlands. Most abundant in the Mississippi basin. Has much commercial value as wood is strong.

---

90. Button Willow or Button-bush

Borders sluggish streams, venturing even into water. Its bark is rich in tannin and has some medicinal properties. Grows among willows, hence the name.


91
10' TO 50'
LEAFLET
7" TO 12"
3" TO 9"
1/2 TO 2/3
Prosopis juliflora
Honey Mesquite
92
50' TO 80'
4' TO 6' long
6' TO 8' broad
1/3 diam.
1' TO 2'
Sabal palmetto
Cabbage Palmetto
93
80' TO 100'
10' TO 12'
1/2" long
1' TO 2'
Roystonea regia
Royal Palm
94
30' TO 80'
10' TO 20'
HUSK
1'
ALWAYS IN LEAF AFTER FIRST BUD
1' TO 2'
Cocos nucifera
Cocoanut Palm
95
5' TO 25'
Tip Sharp
1' TO 2'
3" TO 5"
3" TO 6"
Yucca aloifolia
Spanish Bayonet
96
20' TO 60'
NO LEAVES
SPINES
1/2" TO 1"
3"
1' TO 2'
A.R.J.
Cereus giganteus
Giant Cactus

91. Honey Mesquite

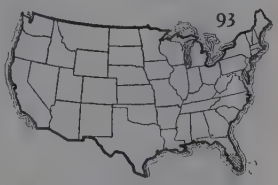
Roots will descend 40 to 60 feet for water. Such roots are valuable fuel supply. Wood useful for ground use, posts, ties. Ripe pods used by Indians as food.

92. Cabbage Palmetto

So called because the green crown at top is edible, though to use it destroys the tree. Grows in rich damp lowlands or on little islands in water.

93. Royal Palm

The stately kind of palm distinguished by its smooth light brown trunk surmounted by smooth green leaf base. Needs a very rich soil.



94. Cocoanut Palm

Blooms and fruits continuously. Edible fruit. Trees can produce 60 yearly. Lumber, leaves, shell and oil all useful. Source of commercial shredded cocoanut. Salt aids growth.

95. Spanish Bayonet

A central woody stem. Very sharp point at end of lateral leaf. Fertilized by moths. Stem and leaf fibre used for cordage by Mexicans. Fruits edible; root soapy.

96. Giant Cactus

A native of the arid desert regions of Central and Southern Arizona. Indians used the ripe fruits as food. Is the largest of the cacti.

Pinus torreyana
97
50' to 60'
5 needles
7½" to 13"
to 5"
8" to 14"
Torrey Pine
P. lambertiana
98
160' to 180'
5 needles
2¾" to 4"
12" to 23½"
4' to 7'
Sugar Pine
P. jeffreyi
99
150' to 180'
3 needles
5" to 9½"
5½" to 11¾"
3' to 8'
Jeffrey Pine
P. sabiniana
100
50' to 75'
3 THIN needles
8½" to 12"
6½" to 10½"
18" to 30"
Digger Pine
P. monticola
101
90' to 100'
5 needles
2" to 4"
6" to 10"
2½' to 4'
Western White P.
P. attenuata
102
15' to 30'
Sometimes 80 feet
3 needles (often in twos)
3" to 7"
Closed
to 6"
6" to 12"
Rarely - 20"
Knobcone P.

A.R.J.

97. Torrey Pine

Exposed to high winds, it is a low sprawling tree; protected, it grows straight. Trees 10 to 12 inches in diameter are 75 to 80 years old. Cones hang to fourth year.

98. Sugar Pine

Usually found at 2,000-3,000 ft. elevation, chiefly on north slopes and canyons; the largest of the Pacific pines. Bears seed after 40-60 years; age 300-500 years.

99. Jeffrey Pine

Very similar to No. 3. Best commercial growth found at 5,000-6,500 ft. altitude. Prolific seeder but heavy seeds do not blow far. A large bodied tree.

100. Digger Pine

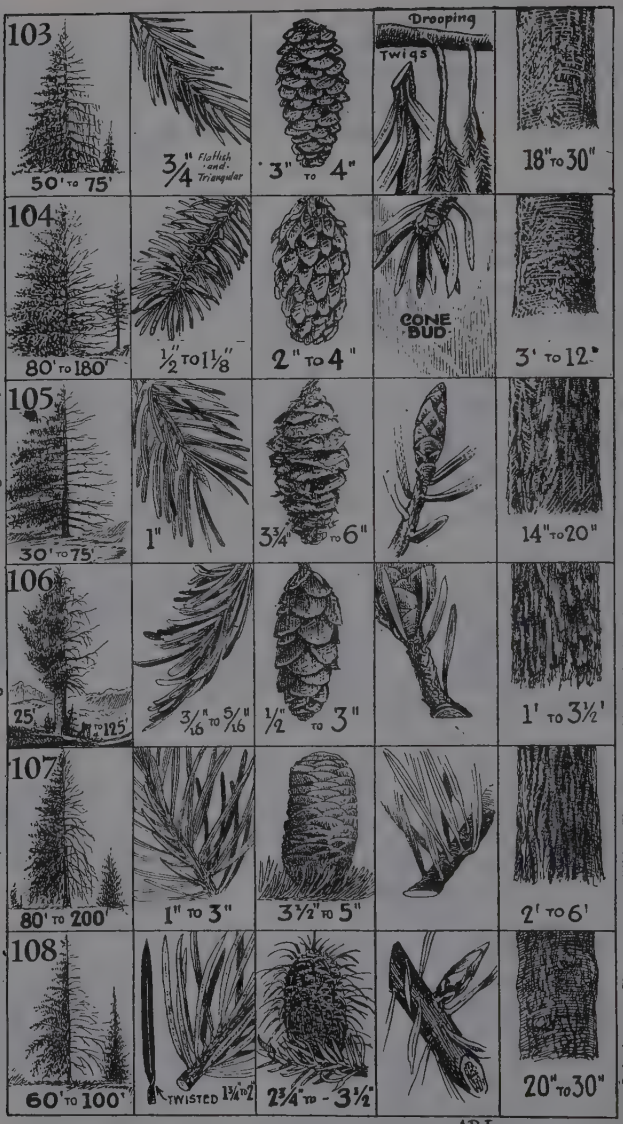
Upper branches of older trees U forked. Foliage, thin and blue gray in color. In rich soil foliage heavier. Wood locally used for fuel; very coarse-grained.

101. Western White Pine

Some of its branches extend out beyond the others, at right angles to the trunk. Reproduces sparingly at irregular intervals of about 2 years. Wood of commercial value.

102. Knobcone Pine

Tree varies under exposed or sheltered growth. Foliage a light yellow-green, cones mature the second year, though they cling indefinitely. Cones rarely open on the tree. Probably not long-lived.

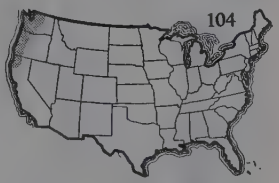

Picea breweriana
103
50' to 75'
3/4" Flat-Flat-and-Triangular
3" to 4"
Drooping Twigs
18" to 30"
Brewer Spruce
Picea sitchensis
104
80' to 180'
1/2" to 1 1/8"
2" to 4"
CONE BUD
3' to 12'
Sitka Spruce
Pseudotsuga macrocarpa
105
30' to 75'
1"
3 3/4" to 6"
14" to 20"
Bigcone-spruce
Tsuga mertensiana
106
25' to 125'
3/16" to 5/16"
1/2" to 3"
1' to 3 1/2'
Mountain Hemlock
Abies concolor
107
80' to 200'
1" to 3"
3 1/2" to 5"
2' to 6'
White Fir
Abies venusta
108
60' to 100'
TWISTED 1 3/4" to 2
2 3/4" to - 3 1/2"
20" to 30"
Bristlecone Fir
A.R.J.

103. Brewer Spruce

Trunk is greatly enlarged at base, tapering rapidly toward top. Found at altitudes of 6,000-7,000 ft. on steep north mountain slopes. Intervals between good seedings probably two or three years.

104. Sitka Spruce

Branches at base of tree often 20 or 30 feet long. Forest grown trees clear of branches for first 40 to 80 feet. Larger trees are from 400-850 years old. Found sea level to 3,500 ft.



105. Bigcone-spruce

Found on dry soils 2,000-7,000 ft. altitude. Trunk is clear of branches only for a few feet. Leaves curved so as to appear to issue from two sides of stem.

106. Mountain Hemlock

Leaves short and plump. Cones vary greatly in color, yellowish-green to bluish-purple. Trees grown in open have branches nearly to ground. Foliage of a season's growth shed fourth year.

107. White Fir

Bark ashy color; tree silvery in appearance. Lower branches of older trees droop. Young growth survives suppression of heavy shade. By a twist at base of leaves, they stand out from stem.

108. Bristlecone Fir

Rare tree. Indian-club-shaped crown, with sharp spires. Trunk rarely clear of branches for more than few feet. Cones ripen in August and break up in September. Seed scale points protrude from cone scales.

109
75' to 110'
1/8" to 1/2"
POD CONE
SEED
1"
2½' to 6'
Libocedrus decurrens
Incense Cedar
110
150' to 200'
1/8" to 1/4"
CONE OPEN
1/2"
3½' to 16'
Thuja plicata
Western Redcedar
111
40' to 60'
1/4" to 1/2"
1"
18" to 20"
Cupressus macrocarpa
Monterey Cypress
112
125' to 180'
1/8"
3/8"
3½' to 6'
Chamaecyparis lawsoniana
Port Orford White-cedar
113
20' to 50'
3/8" to 3/4"
3/8"
6" to 24"
Taxus brevifolia
Pacific Yew
114
35' to 70'
4½' broad
3/8" long
stems: 5' to 6'
20" to 30"
A.R.J.
Washingtonia filifera
California Palm

109. Incense Cedar

In older trees, trunks taper rapidly; crowns, open and irregular. Male and female flowers, on separate twigs on the same branch, open in mid-winter. Cones ripen as in No. 108.

110. Western Redcedar

Old trees very large at base. Except where crowded trees retain all their branches until they become 50-80 feet high. Sometimes the crown has two leaders. Wood survives exposure.

111. Monterey Cypress

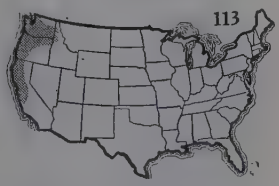
Occurs near Monterey Bay. Cultivated elsewhere in California. Exposed to high winds, it sprawls along the ground. Bark — ashy white outside, deep red-brown beneath.

112. Port Orford White-cedar

Little known as forest tree. Great value as ornamental evergreen. Leaves small and scale-like, soft to the touch. Cones, small and russet-brown, open in October.

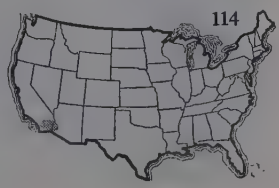
113. Pacific or Western Yew

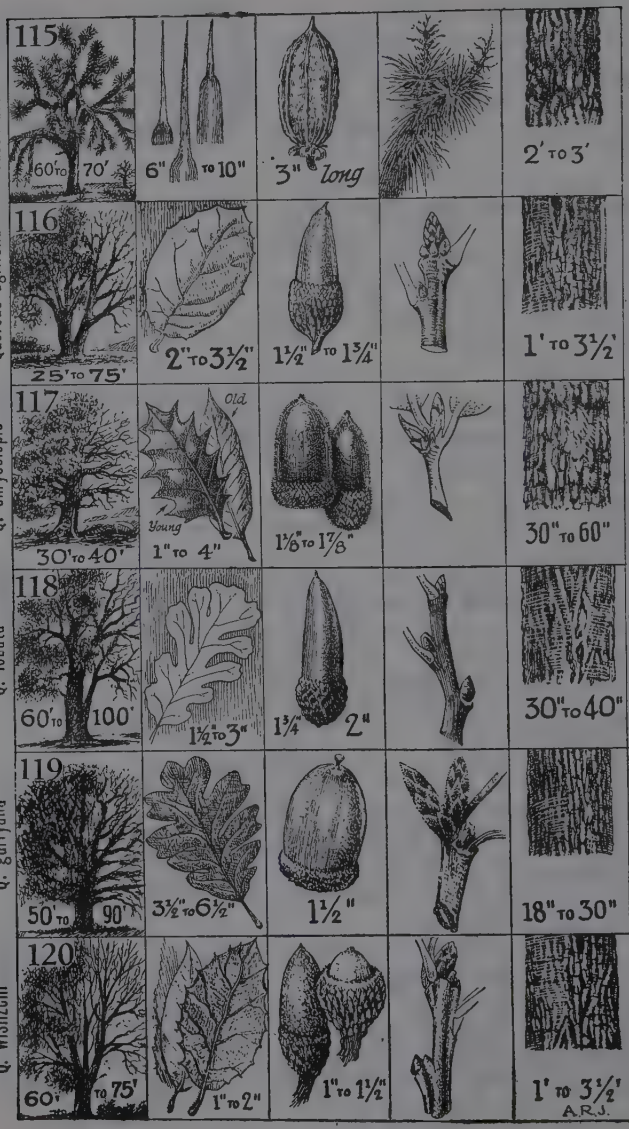
Slender branches stand out straight, bearing drooping branchlets. Leaves produced in one season perish in about five years. Fruit bright coral red. Birds fond of the outside of fruit.



114. California Palm

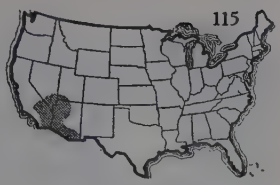
Drooping dead leaves hang for many years covering the trunk nearly to the ground. Very popular for ornamental planting in the dry Southwest. Some are claimed to be over 200 years old.




115
60' TO 70'
6" TO 10"
3" long
2' TO 3'
Yucca brevifolia
Joshua Tree
116
25' TO 75'
2" TO 3½"
1½" TO 1¾"
1' TO 3½'
Quercus agrifolia
California Live Oak
117
30' TO 40'
Old
Young
1" TO 4"
1⅛" TO 1⅞"
30" TO 60"
Q. chrysolepis
Canyon Live Oak
118
60' TO 100'
1½" TO 3"
1¾" 2"
30" TO 40"
Q. lobata
Valley Oak
119
50' TO 90'
3½" TO 6½"
1½"
18" TO 30"
Q. garryana
Oregon White Oak
120
60' TO 75'
1" TO 2"
1" TO 1½"
1' TO 3½'
A.R.J.
Q. wislizeni
Interior Live Oak

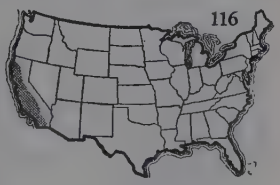
115. Joshua Tree

Leaves armed with bayonet bristles. As leaves die they droop, forming thatch-like cover for trunk. The large roots descend to great depths. Wood has been used locally for physicians' splints.



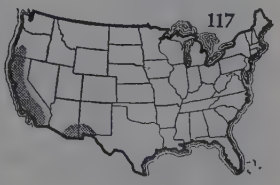
116. California Live Oak

Thin, brittle leaves; resembling holly. Very long, thick, crooked limbs are given off from a short trunk. Acorn cups have the scaly edge turned in. Because of shape, wood used chiefly for fuel.



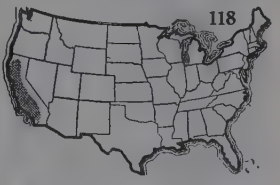
117. Canyon Live Oak

An evergreen oak varying in size from heavy trunked tree to low dense chaparral brush. Leaves vary in shape, also in color from light yellowish-green to pale bluish-green. Acorns mature at end of second season.



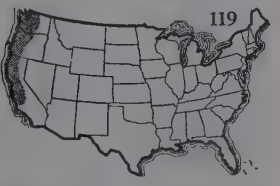
118. Valley Oak

Largest of western oaks. Scattered growth chiefly in open valleys. Found from sea level to 4,500 ft. altitude. Acorns mature in one season. Wood useful chiefly for fuel.



119. Oregon White Oak

Next in size to the Valley Oak. A low shrub on high mountain slopes or on exposed sea coast locations. Wood similar in quality to the eastern white oaks. Is the only timber oak of the northwest coast.



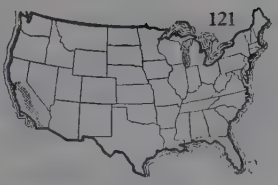
120. Interior Live Oak

An evergreen oak. Leaves vary in shape and remain on two seasons. Acorns mature in two seasons. Wood has no especial economic use except locally for fuel.

121
25' TO 50'
Teeth
7" TO 8"
9 to 17 Leaflets
1/3" TO 3/4"
6" TO 2'
Juglans californica
California Walnut
122
50' TO 90'
2" TO 3"
3/8"
1½' TO 4'
Populus fremonti
Freemont Cottonwood
123
80' TO 100'
Leaf Shoot
2½" TO 6"
1" TO 1¾"
3' TO 4'
Castanopsis chrysophylla
Golden Chinquapin
124
60' TO 80'
3" TO 6"
1"
2½' TO 4'
Umbellaria californica
California Laurel
125
8' TO 10'
1" TO 1½"
½" TO 5/8"
about 1"
Amelanchier florida
Western Serviceberry
126
10' TO 25'
4 TO 7 Leaflets
3" TO 7"
2⅓" TO 3"
3" TO 6"
A.R.J.
Aesculus californica
California Buckeye

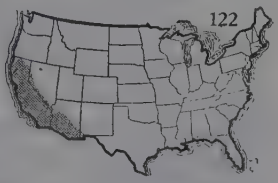
121. California Walnut

Varies in size from a shrub to a tree. Edible nuts, spherical in shape covered with thin velvety husk. Wood used locally for cabinet work because of fine color.



122. Fremont Cottonwood

Very similar to Southwestern, Eastern and prairie species. Rough bark, dark grayish-brown on outside and clear red within. Useful chiefly for fuel. Trees help hold the shifting banks along streams.



123. Golden Chinquapin

So-called because of the yellow under surface of the leaves. Each season's leaves persist about three years. Wood provides excellent saw timber and is suitable for agricultural implements.

124. California Laurel

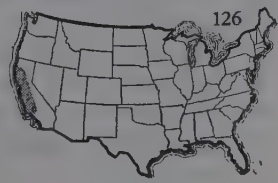
An evergreen. Crushed leaves or bark, emit strong camphor-like odor. Each season's leaves persist two to five years. Fruit, yellowish-green, matures in one season, germinating shortly thereafter.

125. Western Serviceberry

Usually a shrub, sometimes a tree 25-30 feet high. Season's twig growth is clear red. Fruit is blue-black; is edible. Birds and bears eat much of it. Cattle browse on its stems.

126. California Buckeye

Usually shrub-like, sometimes tree. Found on foot hill and lower mountain slopes on stream borders and canyon sides. Chiefly useful as it forms cover where other trees do not readily grow.



Requirement No. 11 (1b)

"Or six species of wild birds, noting such characteristics as plumage, notes, tracks, and habits."

THE SPORT OF BIRD STUDY

By ROGER T. PETERSON
Educational Director,
National Association of Audubon Societies

It is little wonder such a large and growing number of young fellows of Scout age are interested in birds at the present time. A few years ago a frequent attitude was that "bird study is all right for my sister but not for me." That story is certainly a different one now . . . and, without question, the reason is that a great many young people have discovered the kick they can get out of bird-listing or "bird-golf" as it might be called. It's a game—a game of recognition—to see who can turn up the rarest birds or see the most kinds in a day, etc. Bird-listing is the grandest sort of sport you can imagine and many of the devotees of it eventually become quite good naturalists along other lines.

We don't really change much as we grow older, so it is not surprising that many business men should find their chief diversion in this sort of birding. Some of them live for the week-end, when they can get into the old touring car and see what is new in their favorite birding spots.

As in golf, there are the tournaments too. The experts get together usually at the peak of migration in May to see how many species they can find in a single day—to see if they can break their previous all-time record. The goal might be a hundred species or more. To accomplish this they must start before daybreak so the Owls and Whip-poor-wills might be included. New York birders call it the "Big Day," Philadelphians the "Century Run," while Bostonians aptly term it the "Lethal Trip."

S=size of English Sparrow; S—, smaller; S+, larger.
R=size of Robin; R—, smaller; R+, larger.
C=size of Crow; C—, smaller; C+, larger.

By Louis Agassiz Fuertes, Courtesy Slingerland-Comstock Co., Ithaca, N. Y.

Field birding as most of us engage in it is a game—a most absorbing game. It is not necessarily ornithology in its true sense, but is certainly a most fascinating diversion. It leads almost invariably, however, to a wider, deeper interest in birds and in their preservation.

The game of recognition is popular, largely, no doubt, because of the excellent books and pictures now available to help the student. Not so many years ago, most "sight" records were made along the barrel of a shotgun.

There are many other angles to the recreational side of bird study—Banding is the favorite of many more advanced students—capturing birds and releasing them with little aluminum leg-bands stamped with a number and the name of the U. S. Biological Survey. Many important facts that we were not sure of have been determined by banding. Think of receiving a "return" of a bird one thousand miles from the place it was banded! An Arctic Tern banded in Labrador by Dr. Oliver Austin, Jr., was taken off the coast of South Africa, nine thousand miles away, three months later!

Photography has its numerous devotees. Some of the experts swear by the Graflex or reflex-type camera —others by the miniature camera—many get excellent results even with a simple Brownie or a Kodak. Half of the fun is waiting patiently in the blind for a "shot." The other half to see the image of the bird etched out on the film or plate in the dim light of the photographic dark room.

Befriending birds, actually making pets of birds *in the wild* can be done, but like good wild life photography it takes planning and patience. In the winter the Chickadees, Nuthatches and Titmice can be fed from the hand.

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R=size of Robin; R—, smaller; R+, larger.
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By Louis Agassiz Fuertes, Courtesy Slingerland-Comstock Co., Ithaca, N. Y.

Scouts with curiosity are often not satisfied with merely knowing the names of birds. A name is only a handle. They wish to know how birds live, what they do. A blind built at the margin of a pond, near a feeding place, or near a nest makes this intimate knowledge possible. A bird at a distance is just a bird—within a few feet it is a thing of beauty—a thing to marvel at, curious to watch. The courtship, nest building, and the things birds do in their daily lives are as fascinating as any story.

To put it honestly, we can justify our interest in preserving birds because of their economic value because they do good, but at heart we want them protected because we enjoy having them around. Isn't that true?

Useful Books On Birds

FOR IDENTIFICATION

(East) A Field Guide to the Birds, by Roger Tory Peterson
(West) Birds of the Pacific States, by Ralph Hoffman
Pocket Handbooks by Chester A. Reed
Land Birds East of the Rockies
Water Birds East of the Rockies
Birds West of the Rockies

FOR GENERAL REFERENCE

Handbook of Birds of Eastern North America, by Frank M. Chapman
Handbook of Birds of the Western United States, by Florence M. Bailey
Field Book of Birds of the Southwestern United States, by Wyman and Burnell
Birds of the Pacific Coast, by Willard Ayres Eliot
Hawks of North America, by John B. May

ATTRACTING BIRDS

The A. B. C. of Attracting Birds, by Alvin Peterson

BIRD SONG

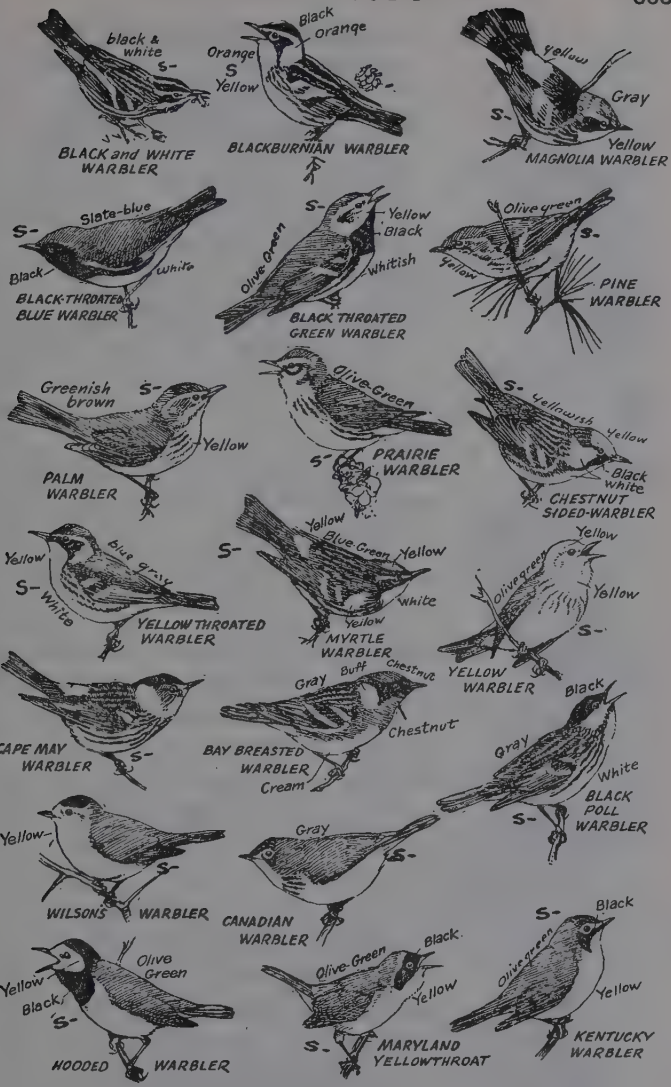
A Guide to Bird Song, by Aretas Saunders
Songs of Wild Birds, by Albert Brand

BIRD BEHAVIOR

Wild Birds at Home, by Francis Herrick

MIGRATION

Migration of North American Birds, U. S. Dept. of Agriculture



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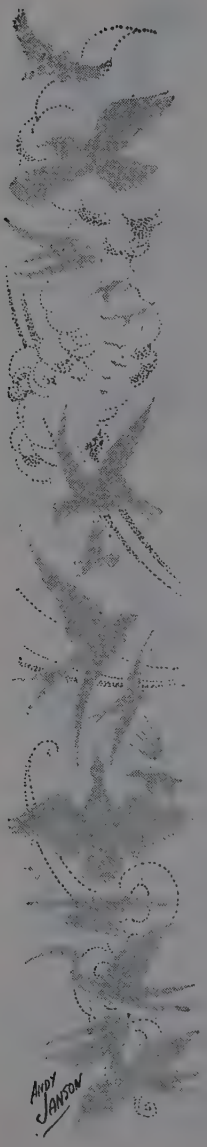
By Louis Agassiz Fuertes, Courtesy Slingerland-Comstock Co., Ithaca, N. Y.



BIRD MIGRATION

By FREDERICK C. LINCOLN
Associate Biologist,
Bureau of Biological Survey,
U. S. Department of Agriculture

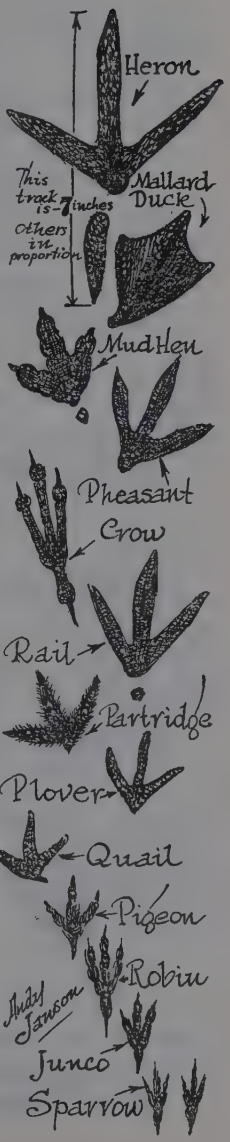
From the earliest historical times, the attention of man has been attracted to the northward journey of the birds in the spring and their return in fall. Probably the most ancient reference to these travels of the winged hosts is found in the Bible, where, in the Book of Job, we read. "Doth the hawk fly by thy window and stretch her wings toward the south?" Other early writers, particularly the Greeks, made frequent mention of the birds of passage.

In answer to the oft-repeated question, "Why do birds migrate?" It must be stated that we do not have any positive knowledge as to the original causes. It may be that before the Ice Age or glacial epoch, many species of birds that are migratory (or closely allied relatives) were then resident and were driven southward by the advance of the ice, which forced them to establish new homes closer to the equator. But the love of the more northern latitudes was strong and the birds moved northward each time the ice retreated, only to be driven back as it again advanced.

Or is may be that the tropical regions were the ancestral home of all the birds, but that due to overcrowding, certain species were forced to seek new surroundings in which to build their nests. Pushing north and south, first in short exploring trips, and being regularly pushed back by the advent of winter, they gradually learned to maintain both summer and winter homes.

The majority of North American migratory birds spend their winter months in the southern United States, Mexico, Central America, the islands of the Caribbean Sea, and northern South America. Some species, such as the Nighthawk, Golden Plover, Yellow-legs, Cliff Swallow, Scarlet Tanager, and Bobolink do not stop even at the equator, but fly on south as far as the pampas regions of Argentina or Patagonia.

It is true that some birds do not migrate and are content to brave the storms of winter in a constant effort to obtain sufficient food. Thus we find Bobwhites, Cardinals, some Wrens, Chickadees, and others, present in some places during the entire year.



Distances Traveled

Many of the Shorebirds, Thrushes, and Swallows, the Bobolink, Nighthawk and Scarlet Tanager, birds that are well known around our homes in summer, are in winter found in different type of country in South Argentina or Patagonia. In Europe a similar condition exists, and most of the northern nesting birds winter around the Mediterranean Sea or in Africa.

The Nighthawk occurs in summer north to northwestern Canada, and in winter south to Argentina, fully 7,000 miles away. Several species of Sandpipers that breed north of the Arctic Circle go south in winter as far as Patagonia in the most southern part of South America, thus flying about 16,000 miles in making the annual round trip.

The Golden Plover travels 7000 miles

The world's record as an aerial traveler, however, is held by the Arctic Tern, a graceful species of water bird that nests as far to the north as land has been discovered, and which in winter is found in the vicinity of the Antarctic continent 11,000 miles from the area where their nests are made.

S=size of English Sparrow; S—, smaller; S+, larger.
R=size of Robin; R—, smaller; R+, larger.
C=size of Crow; C—, smaller; C+, larger.

NOTE: *The sizes and colors of the birds on the foregoing plates were supplied by Dr. W. DeWitt Miller of the American Museum of Natural History.*
By Louis Agassiz Fuertes, Courtesy Slingerland-Comstock Co., Ithaca, N. Y.

Sense of Direction

How do the birds find their way over such vast expanses of land and water? This is by far the most wonderful feature of bird migration and also of our common door-yard species that is the most difficult to explain. Some that gratefully accept our hospitality and build their nests in the boxes placed for their use, will return year after year.

The eye of a bird is probably the most perfect organ of vision in Nature and this, supported by an excellent memory, no doubt goes far in guiding them on their way. But without assistance from another agency, these would not be sufficient. In all probability the "sense of direction," a kind of "sixth sense," is all powerful in directing the flight. There are some persons who have this sense developed to a remarkable degree, particularly woodsmen who all their lives have lived in the dense forests, where landmarks are almost totally lacking, but who never seem to be lost. In the case of the Homing Pigeon this sense is carefully developed and exploited by fanciers for the carrying of messages or the winning of races. In the migrating birds it serves much the same purpose, guiding them to their homes in the north and back again to winter quarters after the nesting period.

Speed

There is a very general misconception concerning the speed that is made by birds in flight. Frequently we will hear some one speak of a certain bird or a flock of birds that were flying "a mile a minute." There are undoubtedly many birds that can and on occasion do make speeds even greater than that. The ducks, the shorebirds, the falcons, the swifts, and some others, are noted for the

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R=size of Robin; R—, smaller; R+, larger.
C=size of Crow; C—, smaller C+, larger.

NOTE: *The sizes and colors of the birds on the foregoing plates were supplied by Dr. W. DeWitt Miller of the American Museum of Natural History. By Louis Agassiz Fuertes, Courtesy Slingerland-Comstock Co., Ithaca, N. Y.*

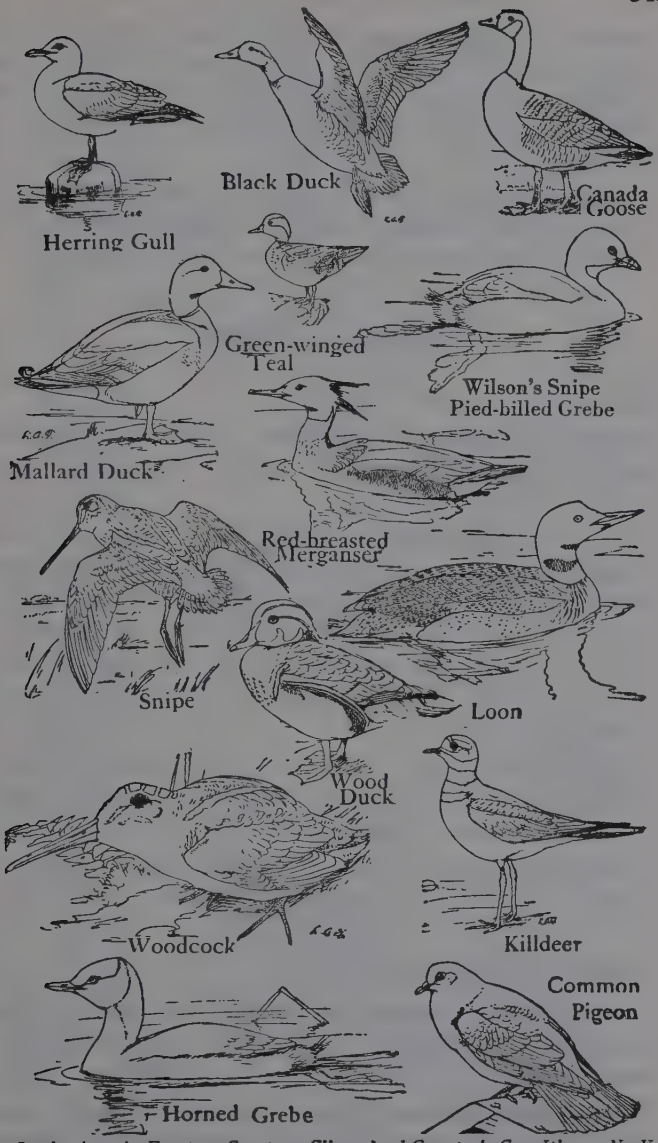
rapidity of their flight, particularly when pursuing game or attempting to escape from an enemy. In the 1914 World War, an English ornithologist serving in the air service gave chase in his airplane to one of the larger European hawks. He found that in diving to escape the plane, this hawk attained a speed of 110 miles an hour.

Such speeds are nevertheless very exceptional, and it is safe to say that very few birds can, even when pressed, develop a speed of sixty miles an hour. Thirty or forty miles an hour is more nearly the average speed, and during migration flights it may be even less.

Energy Expended In Migration

No other living creature is so perfectly designed for sustained travel through the air as a migratory bird. Powerful wing muscles are attached to a skeleton that is of great lightness, due to hollow bones that are filled with air, while of all materials intended to support a body in the air, nothing can be imagined to exceed a feather in perfection. The typical feather has a rather complicated structure, which can not be discussed here. It is sufficient to suggest that the wing feather of a pigeon or other bird be examined carefully under a microscope if possible.

A good idea of the economy of the bird as an aerial machine may be cited in referring to the Golden Plover, a shorebird that breeds in the northern part of this continent and winters in South America. In its fall migration it is almost unknown in the United States, so we feel sure that it flies south, not along the coast, but far out to sea. That means a non-stop flight from Nova Scotia to South America, a distance of about 2,400 miles. Less than two ounces of fuel, in the form of the fat on the bird's body, is all the energy that is



By Louis Agassiz Fuertes, Courtesy Slingerland-Comstock Co., Ithaca, N. Y.

required. To make such a trip, a light scout airplane would probably consume 120 gallons of gasoline, in addition to oil, but if it were as economical of fuel as the Golden Plover, all it would need would be about fifteen gallons.

These are only a few of the interesting features of a subject that deserves careful attention from everyone interested in the preservation of native birds.

USEFUL BIRDS

Enemies Of Insects

Of Insects In Open Air—Barn Swallow, Chimney Swift, Kingbird, Phoebe, other flycatchers and swallows.

Of Insects On Flowers, Leaves And Twigs Of Fruit Trees—Chickadee, all Warbles, Red-winged Blackbird, Bluebird, Cedar Waxwing, Catbird, Hummingbird, Pine Siskin, Kinglet, Vireos, and numerous others.

Of Insects On The Bark And Wood Of Fruit Trees—Brown Creeper, Nuthatch, Downy Woodpecker, Hairy Woodpecker.

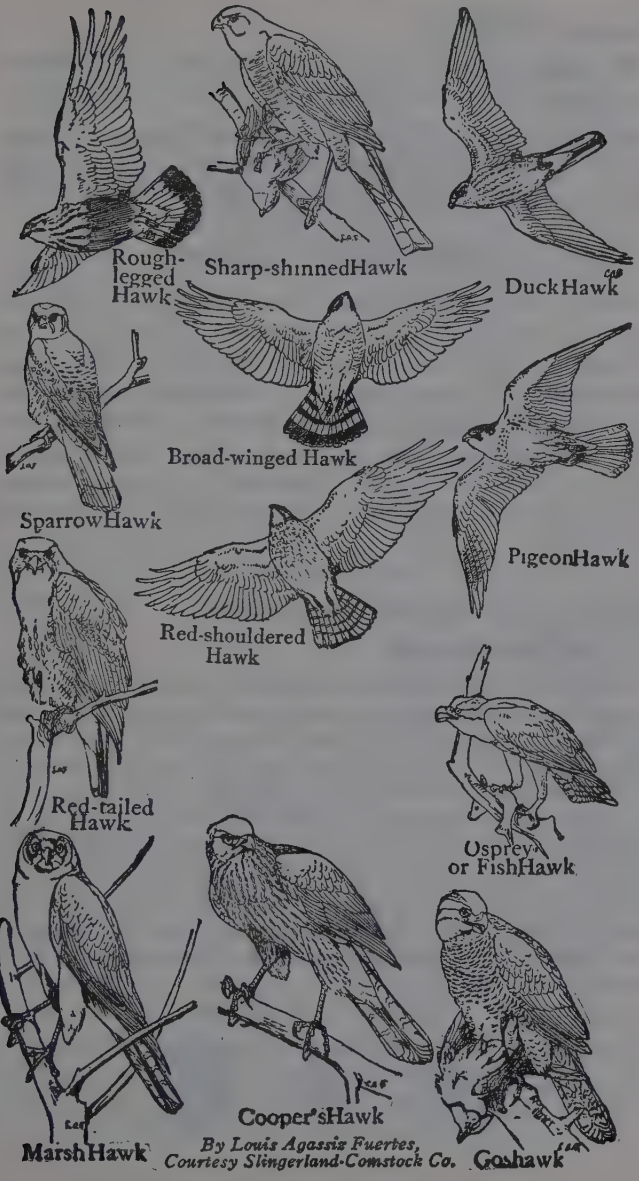
Of Insects On The Ground — Meadowlark, Flicker, Bob-white, Song Sparrow, Bobolink, Horned Lark, Vesper Sparrow, Towhee, and others.

Of Insects In Damp Places — Spotted Sandpiper, Bronzed Grackle, Red Winged Blackbird.

Enemies Of Weeds

Of Weeds In Summer—Goldfinch, Bob-white, Chipping Sparrow, Pheasant, Mourning Dove, Song Sparrow.

Of Weeds In Winter—Tree Sparrow, Redpoll, Snow Bunting, Junco, White-throated Sparrow, Bob-white.



By Louis Agassiz Fuertes, Courtesy Slingerland-Comstock Co.

Enemies Of Mice

By Night—Great Horned Owl, Screech Owl, Barred Owl, Long-eared Owl, Short-eared Owl, Barn Owl.

By Day—Snowy Owl, Marsh Hawk, Red-shouldered Hawk, Sparrow Hawk, Crow, Rough-legged Hawk, Broad-winged Hawk, Shrike and others.

DESTRUCTIVE BIRDS

Certain birds at times do some damage to crops or poultry. This damages is often over-estimated, and the useful activities of the same birds that more than compensate in many cases, are entirely overlooked. Any control if undertaken should be confined to the type of bird doing the damage. There are so many kinds of Hawks, so widely different in feeding habits, that great care particularly is needed when dealing with them.

Offer Of The National Association Of Audubon Societies

The National Association of Audubon Societies each year furnishes at a price of ten cents, which is half the cost of printing and distribution, a special set of Bird Leaflets with colored pictures of birds. These are furnished to groups of ten or more and anyone who organizes a bird-study club of 25 or more receives a year's free subscription to the magazine *Bird-Lore*. The Audubon Society also offers Bird Leaflets with pictures in color which may be had at the price of five cents each, which represents the cost of printing. Any Scout may receive full information by writing to the National Association of Audubon Societies, 1006 Fifth Avenue, New York, N. Y.

Requirement No. 11 (1c)

"Or six species of native wild animals, noting characteristic form, color, call, tracks, and habits."

Names Of The Young Of Animals

National Scout Commissioner Daniel Carter Beard has suggested that the names applied to the young of various animals would be of interest to Scouts. Of course, as the American Museum of Natural History of New York City reports to us, animals unknown in England would only gradually come to have a common name in English.* Also inconspicuous animals rarely receive special names for young†, or the sexes. The names follow in the order in which the animals are discussed in the following pages:

Bobcat, lynx—kitten; Puma—kitten; Fox, Coyote, Wolf—cub or whelp; Bear—cub; Weasel, Mink—kit; Otter—cub or whelp; Skunk*—kit; Raccoon*—cub; Opossum*, Squirrel†, Chipmunk*†, Porcupine*—none; Rabbits, Hares—leveret (rare); Beaver, Muskrat*—kit; Woodchuck*, Prairie Dog*, Gopher†, Pocket Gopher*†, Ground Squirrel, Kangaroo Rat*†—none; Moose—calf; Elk (wapiti)—calf or fawn; Deer—fawn; Antelope (American*)—fawn or kid; Buffalo—calf; Mountain Sheep—lamb; Rocky Mountain Goat*—kid; Bat†, Shrew†, Mole†, Mouse†, Rat†—none.

WILD ANIMALS A SCOUT MAY MEET

By Major Edward A. Goldman, Senior Biologist, Wild Life Research, U. S. Dept. of Interior.
(Drawings by Leonard Rossell)

The mammals are the highest class of animals, but most of them are shy and retiring in habits; very many come out only at night and therefore are comparatively little known. They are everywhere, but not easily observed. To penetrate something of the mystery of their lives, to learn some of their well-guarded secrets, is the privilege of the Scout. The brief treatment here merely suggests the scope of the field to be covered.

THE CAT FAMILY

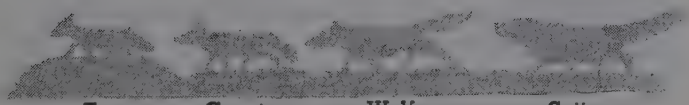
The Bobcat, Or Bay Lynx (*Lynx rufus*)

A Scout may meet a bobcat, bay lynx, or wildcat, as the smaller of the two lynxes is called, in the timber in almost any part of the United States. In the northern part of the country, its general range overlaps that of the Canada lynx. The tail is bobbed, but the black limited to the upper side, and the ears are tufted as in the Canada lynx from which it differs, however, in much smaller size (usually less than 20 pounds as compared with 30) and the slenderness, especially of the legs and feet. Bobcats kill for food many rabbits, squirrels, mice of the fields and woods, quail, grouse, and other ground frequenting birds. It sometimes becomes bold enough to raid chicken roosts and even kill lambs and young deer. Owing largely to its destructiveness to game, the bobcat is generally regarded as injurious to human interests and its numbers should be kept under rigid control. (Tracks 2½ inches, see page 161.)

The Mountain Lion

(*Felis concolor* and relatives)

This big cat, known as mountain lion, cougar, puma, and panther, roams over more territory than any other American mammal, and yet is rarely seen. It once ranged from Canada to Patagonia and across the entire width of both northern and southern continents. With the settlement of the country, however, and the disappearance of the larger game, upon which it preys, it has become extinct over great areas in the Eastern United States. It is still generally distributed, however, wherever large game is found, in the wilder, unoccupied areas of the West, and in the vast forests of Central and South America. It is a thin-bodied, lightly built gray or tawny cat, with a small head and handsome face. The mountain lion is timid and inoffensive to man, but very destructive to deer and other large game animals, and to domestic stock, especially horses, on open ranges. Estimates based on observations regarding the extent of its inroads indicate that on ranges where deer are fairly abundant the lions probably kill 50 to 100 per year; on some stock ranges these animals unmolested render it impossible to raise colts, and so much other stock is destroyed that their presence becomes intolerable. As a result they are being systematically hunted in many sections of the West. (A cat track some 4 inches across; see page 161.)



Fox Coyote Wolf Setter

THE DOG FAMILY

The Red Fox (*Vulpes fulva* and relatives)

The general range of the red fox is through the forested regions from Alaska to Canada south to Texas, but it does not occur in the western mountains south of central California and New Mexico, and is replaced on the open, western plains by the smaller, grayish, desert and kit foxes. The red fox of normal color is well marked by the red coat and white-tipped tail.

Color variations are the black and silver foxes, so extremely valuable for their fur, and the cross fox a combination of the black and red. The rearing and selective breeding of foxes in captivity, for their fur has in recent years become so lucrative an industry that millions of dollars are invested in it.

The cunning of the red fox is proverbial, and in spite of much hunting and trapping it remains a resident of the most densely settled country. The gray fox ranges from the Northern States to Costa Rica. (Tracks similar to those on page 159.)

The Coyote (*pronounced ko-yo'te*) (*In West, Ki'ote*) (*Canis latrans* and relatives)

The small feet, nose and small pads readily serve to separate the coyote from the large wolf of any age. Coyotes are animals of open plains and thinly wooded country of the Middle and Far West, from sea level to the lower edge of permanent snow on the highest mountains. Unlike many other animals that have disappeared from vast areas as the country was settled the coyotes adapted themselves to civilized conditions and have become the most troublesome predatory animal with which we have to deal. They are now found in

places east of their original domain, and they followed the trail of the gold miners northward, spreading into the Yukon and Mackenzie River valleys.

Unlike the large wolves that require larger game or domestic stock for subsistence, and that disappear when these are lacking, coyotes thrive by feeding upon a great variety of smaller animals including many rodents, and small game such as young rabbits and quail, but crave a change of diet and kill many young deer, antelope, and other game, sheep, goats and other live stock. Coyotes may often be seen abroad during the day and lend interest to an otherwise dreary landscape, but their power for harm has forced the Federal and Western State governments to adopt methods for their control. (Tracks are similar to those on page 159, only claws more prominent.)

The Gray Wolf (*Canis lupus* and relatives)

Wolves formerly infested nearly all of North America as far south as the Valley of Mexico, except certain arid desert regions and tropical lowlands. Owing to their size, strength and ferocity they were undoubtedly the greatest foe of the big game that inhabited the region in vast numbers. With the denser settlement of the country, however, they were hunted down and have been gradually disappearing along with most of the large game upon which they are mainly dependent. In the Far West, especially on stock ranges, as the game decreased in numbers these marauders turned their attention to

domestic animals and became so destructive that campaigns against them are being carried on by Federal, State and county forces. As a result, comparatively few now remain in most parts of the country. In the Far North, white Arctic wolves still harass the great herds of caribou and menace the musk ox much as their relatives formerly did the game herds farther south. As nature lovers we are loath to contemplate the extinction of any animal, but the wolf has proven himself to be so destructive that he is regarded as an outlaw and must be dealt with accordingly. (Wolf tracks are similar to those on page 159, only larger than coyote or fox.)

THE BEAR FAMILY

Bears of four principal types inhabit North America. The peculiar white polar bear adapted to a life on the ice, and in the waters of Arctic seas is not likely to be met by the Scout.

The Black Bear (*Euarctos americanus*)

The black bear formerly ranged throughout the forested areas from the northern limit of tree growth in Canada and Alaska, south to Mexico. Owing to the settlement of the country they have disappeared over much of this territory, but are still not uncommon in some sections. The cinnamon bear, still believed by many to be of another kind, is only a variation of the black, and cinnamon cubs are sometimes found in the same litter, and are therefore the same species. Bears in general vary much in color, but the sharp, strongly curved claws of the

Black Bear

black species serve to separate it from the grizzly bear of any size. These claws enable them to climb trees very readily. These bears are generally harmless and should be protected except during certain seasons when regulated hunting may be permitted in some places.

The Grizzly Or Silver-Tip Bear (*Ursus horribilis*)

Grizzly bears range from Alaska southward through the high mountains of the West to Mexico. Not all grizzlies are grizzled. Some resemble cinnamon color phases of the black and other species, and the most reliable way of distinguishing them at a glance is by the great length (often 2 or 3 inches), slight curvature, and bluntness of the claws on the fore feet. With such claws the grizzly bears lack the tree-climbing powers of the smaller black bear.

The early explorers of the Rocky Mountain region gave the grizzly bears, which were found numerous in places, a reputation for ferocity not shared with any other animal. Since the general occupation of the country by man they have disappeared much more

Alaskan Brown Bear

Grizzly Bear

rapidly than the black bears, and are now rare or entirely gone from much of their former range; and with lessened numbers the grizzlies have become as shy and retiring as the black bears. The grizzly bears are exceeded in size by the great brown bears of the Alaskan coasts and islands, which are the largest bears in the world. (For tracks see page 352.)

THE WEASEL FAMILY OF FUR-BEARERS

The weasel family consists of a varied assortment of fur bearers, differing widely in habits and appearance. It includes, besides the weasels, the mink, otter, and the skunks.

The Weasels (*Mustela cicognanii* and relatives)

The weasels comprise several kinds of small, but deadly, enemies of birds and of rodents often much larger than themselves. These ruthless little hunters, roaming nearly everywhere, kill not only for food, but for the sheer love of killing. Birds of nearly all kinds, including game species and poultry, also rabbits, squirrels, chipmunks are among their victims. The fur is valuable, but owing to their destructiveness, weasels are outlawed in many places. (Footprints shown on page 160.)

The Mink (*Mustela vison* and relatives)

The mink, really a large weasel, lives usually in the woods near the water. Like the weasel it is blood thirsty and kills far beyond its needs for food. Owing to

greater strength it is able to overpower larger game than the weasel. It is frightfully destructive on the nesting grounds of ducks and other water fowl. Many small woodland creatures are preyed upon, and it loves to enter the water, swimming and diving expertly, in pursuit of muskrats, fish and other aquatic animals.

Owing to the outstanding excellence of the fur, the mink is persistently trapped and its numbers have been greatly reduced, though the way it survives in places is astonishing. It is savage and courageous. (See the mink tracks on pages 155 and 159.) (Weasel, mink and marten tracks differ chiefly in size and in the order named.)

The Otter

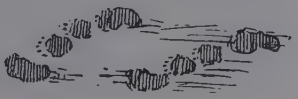
(*Lutra canadensis* and relatives)

The otter is rather clumsy in its movements on land and is much more at home in the water where it dives and swims with remarkable ease and swiftness.

It feeds largely upon fish. The otter was formerly common and generally distributed along streams and lake shores, but has been trapped for the fur until it is now rare. (Tracks shown on page 161.)

The Skunks (*Mephitis mephitis* and relatives)

Skunks are best known by their odor, which is overpowering and creates in most animals, including man, an almost uncontrollable desire to avoid close contact with



them. There are three principal kinds varying widely in size and color markings, but not so much in smell.

The furs of the striped and spotted skunks are very handsome and desirable when relieved of the characteristic odor. The track shown on page 355 is at a gallop.

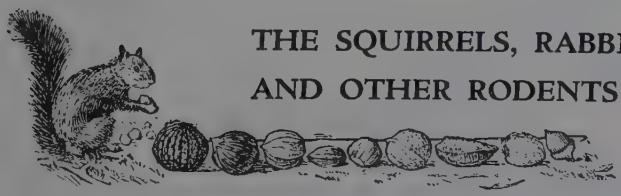
The Raccoon (*Procyon lotor*)

In the timber near streams or lakes even within the suburbs of some of our cities, the raccoon, more familiarly known as "coon," makes its home. It is an expert climber and lives commonly in dens in hollow trees and seeks safety in such places when pursued by men and dogs at night. It is gratifying to know that the coon is holding its own in places where many of the other larger animals are no longer found. (See tracks on page 156.)

The Virginia Opossum (*Didelphis virginiana*)

The opossums are American representatives of the order of Marsupials, or pouched mammals, mainly confined to Australia. The young are very small and helpless when born and are placed in a pouch formed by a fold of the skin on the abdomen of the mother where

they remain for some time attached to the teats. The opossums live mainly in the tropics, and there are many kinds varying from tiny mouse-like creatures to our Virginia species which has spread northward to Canada, and has secured a foothold where introduced in southern California. Its habit of "possoming" or pretending death in emergency is a peculiar characteristic, not shared with other opossums which fight savagely when disturbed. (For tracks, see page 157.)



THE SQUIRRELS, RABBITS AND OTHER RODENTS

The Tree Squirrels (*Sciurus carolinensis* and relatives)

The squirrels are everywhere woodland favorites owing to their sprightly habits, grace and beauty. There are various kinds, differing considerably in habits and distribution. After mentioning the gray and red and fox squirrels of the Eastern and Southern States, we may pass on to several Western species including the beautiful Abert and Kaibab squirrels of Colorado, New Mexico and Arizona, which in winter bear long, erect tufts of hair on the ears. (See tracks on pages 156 and 160.)

The Flying Squirrels (*Glaucomys volans* and relatives)

The so-called flying squirrels do not really fly. They differ from other members of the squirrel family, however, in the extension of the skin along the sides between the fore and hind limbs. When they leap with outstretched limbs from a high point on a tree this membrane acts as a parachute and enables them to glide downward and across to a lower place on another tree. Two principal kinds are nocturnal in habits and little known. (Tracks similar to those on pages 156 and 160.)

The Ground Squirrels

(*Citellus tridecemlineatus* and relatives)

The ground squirrels comprise a varied assortment of middle and far western members of the squirrel family that burrow in the ground and climb very little. These include the thirteen-striped ground squirrels of the Central Plains States, the beautiful golden chipmunk of the Rockies and the Sierra Nevada, the large rock squirrel of the West, the spotted ground squirrel, and the antelope "chipmunk" of the desert Southwest, the latter with the short, conspicuously white tail doubled stiffly forward over the back. Ground squirrels are abroad during the day and have many habits that are interesting to observe, but are destructive to crops in places, and measures to reduce excessive numbers have sometimes become necessary. (Tracks similar to chipmunk, page 158.)

Golden Chipmunk

The Chipmunks (*Tamias striatus* and relatives)

Many Scouts meet the eastern chipmunk. In the western mountains, it is replaced by many kinds, similar in sprightliness and grace of movement, but differing notably in beauty of coloring. Chipmunks burrow in the ground; but are commonly seen perched on a rock or stump. They climb trees to some extent but lack the agility of the tree squirrel. (Tracks shown on page 158.)

Eastern Chipmunk

The Cottontail Rabbits

(*Sylvilagus floridanus* and relatives)

Several kinds of cottontail rabbits, and their allies the brush and swamp rabbits, which lack the conspicuous "cotton tail," range collectively from the Atlantic to the Pacific Ocean. These denizens of the briar and brush patch afford pleasure to those who love to watch them when at rest, or their headlong dash for cover at the least alarm. (See tracks on page 155.)

Cottontail

Snowshoe Rabbit

The Snowshoe Rabbit pictured here is listed with the Hares and its fleet-footed long-eared relatives the Jack Rabbits, on page 360.

Snowshoe Rabbit

The Jack Rabbits And Hares

(*Lepus californicus* and relatives)

The jack rabbits are inhabitants of the Western Plains sometimes becoming so abundant that field crops are destroyed, and poison campaigns are organized against them. Unlike the jack rabbits, the varying hares, or snowshoe rabbits are forest animals. They range south from the northern woods along the high mountain ranges to West Virginia, New Mexico and California. Like some other northern animals they become white in winter.

The Porcupine (*Erethizon dorsatum* and relatives)

The northern porcupine, with its spiny armament, is one of the most remarkable of American rodents. Allied species with prehensile tails inhabit tropical forests from Mexico to South America. Porcupines range in the northern forests across the continent. They have a slow, shuffling gait on the ground and are deliberate, but expert climbers in a tree, ascending as far as the limbs will bear their weight. When crowded too closely they turn their backs, bristling with criss-crossed spines, to the enemy, and a quick side slap of the tail, leaving spines driven deeply into the skin and flesh of the intruder who approaches too close, is no doubt the basis for a common belief that porcupines "shoot" their quills. In spite of the protective spines they are sometimes killed and eaten by mountain lions. Porcupines feed largely on bark, and where very abundant, girdle and destroy much timber. (The tracks are shown on page 161.)

The Beaver

(*Castor canadensis*)

The beaver is the largest North American rodent. The thick fur, hind feet webbed between the toes, and the broad, flat, scaly tail fit it for a home largely in the water. Trees, sometimes 2 feet or more in diameter, are felled, with the large chisel-like front teeth. Many small branches, the bark of which serves as food, are then lopped off and firmly embedded in mud and used in the construction of dams. Beavers are excellent engineers and these dams are designed to maintain a uniform water level covering the entrances to their burrows and houses. At the time of the discovery of North America they were found in great abundance in suitable places along streams and the shores of lakes wherever timber grew, from the Atlantic to the Pacific coast, and from Alaska and northwestern Canada to the Mexican border. Owing in part to the value of the skins for furs, the beavers have been much persecuted and no longer occur over a large section of the former range. In places beavers cause damages to human interests by cutting down trees in orchards, or by undesired flooding. (Beaver foot and tail tracks are shown on pages 159 and 160.)

The Muskrat (*Ondatra zibethica*)

Like the beaver, the muskrat is adapted to a life largely in the water; the hind feet are webbed and the tail is flattened along the sides to serve

as a rudder. The fur is dark brown, soft and thick; and owing to the great numbers, millions being caught each year, the muskrat is our most important fur-bearer. It inhabits marshes where round topped houses are built of rushes. Muskrats also burrow in banks, the entrances being submerged as are those of the beaver. Its food consists largely of the tender, succulent stems of various aquatic plants.

The Woodchuck (*Marmota monax* and relatives)

This is the "groundhog" referred to in the old superstition which expected him to break his winter sleep and come out of his burrow for weather observations on February 2, called therefore "groundhog day." The woodchuck is active during the day and is therefore fairly well known. A larger, grayish western species, the whistler (*Marmota caligata*) is found in the Rocky Mountains as far south as New Mexico and in California.

The woodchuck, really just a kind of big ground squirrel, commonly lives in the woods where it burrows under rocks, ledges or other shelter, often ranging out into the open fields where it may be destructive to cultivated crops. As it comes out during the day, and wanders about in the vicinity of the burrow it is readily seen, and has become better known than many other animals. Dogs are fond of chasing the woodchuck which when overtaken turns and, using its large teeth, fights savagely. (See tracks on page 159.)

The Prairie Dogs

(*Cynomys ludovicianus* and relatives)

Prairie dogs bark, but are not dogs. They are rodents closely related to the ground squirrels. There are two principal kinds, the black-tailed prairie dogs of the Great Plains, and the white tailed prairie dogs of the high plateau region farther west. Sitting stiffly erect at the entrance of their burrows these inhabitants of the open country are conspicuous and have always been objects of interest to passing travelers.

The Pocket Gopher (*Geomys bursarius* and relatives)

The pocket gophers comprise a large group of rodents adapted, like the moles with which they are sometimes confused, to a life almost entirely underground. They are strongly built animals, with large front teeth, and heavy muscular fore limbs armed with stout claws for digging. Pockets in the cheeks are used for carrying food. They range from Canada to Panama. Hills of earth thrown out mark the location of elaborate underground workings. They multiply and cause much damage to crops in places, and trapping or poisoning becomes necessary to control them.

The Kangaroo Rats (*Dipodomys ordii* and relatives)

Kangaroo rats are neither kangaroos nor rats nor any combination of the two. They comprise several kinds of handsome, odd-appearing rodents of a peculiar family widely distributed in the arid regions of the West. In size they range from large mice to rather large rats. They are somewhat kangaroo-like in form, posture and gait, the hind limbs enormously developed for jumping and the fore limbs small and weak. Pouches in the cheeks are for carrying food. The tail is long and has a brush at the end. The very large eyes, and bright color markings, including white diagonal hip stripes, and the large brush-tipped tail distinguish kangaroo rats from all other animals.

They are burrowing animals. Allied to the kangaroo rats are the little pocket mice. (Perognathus.) (See page 374.) (For tracks see pages 157 and 158.)

THE DEER FAMILY

Americans have good reason to be pleased with their allotment of the deer of the world, because North America's share of species far surpasses the showing of all other continents, including Asia. We have the giant moose, the picturesque caribou, the lordly elk, the strictly American groups of white-tails and black-tails, and the little-known brockets of Mexico and Central America.

The Moose (*Alces americana*)

The moose, with its giant size, ungainly form, turned down nose, and the enormous, flattened antlers of the bulls scarcely suggests a deer, yet it is the largest member of the deer family. The moose is at home in the

northern forests from the Mackenzie and Yukon river valleys south to Maine, Minnesota, and Wyoming. It is larger in some parts of its range than in others, those from the region of the Kenai Peninsula in Alaska being the largest in the world. Here some of the bulls weigh over 1,400 pounds and the huge antlers spread 6 feet or more. It favors thickets of tamarack, birch, aspen, willow, spruce, and alder, growing in swampy places. It enters the water freely, and may sometimes be seen holding the entire head under the surface in reaching for deep growing water plants. Moose are usually very shy, but during the breeding season, bulls may stand their ground and have even been known to charge a hunter. (Tracks similar to those on page 161, only larger.)

The American Elk Or Wapiti *(Cervus canadensis)*

The elk is the most majestic of all deer. The American elk, a near relative of the stag of the Old World, is a massive animal, full grown bulls weighing over 800 pounds. In the days of the early settlers they ranged in great abundance nearly across the continent. They occupied the vast territory from central Massachusetts and North Carolina to near the Pacific Coast in California, and from the Peace River, Canada, to southern New

Mexico. With the settlement of the country these large game animals were crowded out and have become extinct over most of their former range. Efforts to restock certain sections have met with gratifying success, however, and elk are in no danger of extermination.

The elk in and about Yellowstone Park are of special interest as under protection in that region they have survived in greatest numbers and there we can visualize what the former great herds were like. Efforts to provide sufficient winter forage for some of the elk led to the establishment of the elk refuge at Jackson, Wyoming. Here thousands of confiding animals congregate in winter to be fed, and present a wonderful spectacle. Although apparently so lacking in fear when on the feeding and resting grounds the elk regain their customary wildness when they return to the mountains in summer. Many elk are also fed in winter in Yellowstone National Park. There are over 40,000 elk in and about Yellowstone Park; 9,000 more in the Olympic peninsula in Washington. Other herds are found in Canada. (Large tracks like those on page 161.)

The Virginia, Or White-Tailed Deer

(*Odocoileus virginianus*)

White-tailed deer are of several kinds, ranging as a group from Southern Canada to South America, except near the Pacific Coast north of Sinaloa, Mexico. The Virginia deer is the best known. The Coues deer inhabits Arizona and Western Mexico. The antlers of the white-tails consist of a main beam with smaller branches, unlike the evenly divided prongs of the black-tail and mule deer. Who can forget a pleasurable thrill at seeing a white flash where apparently nothing had been before as a woodland beauty in the form of a startled white-

tailed deer bounds away? This deer is still common, in places, but through settlement of the country, and too much unregulated hunting has entirely disappeared from large sections. Experience has indicated the practicability of reintroducing deer in regions still favored by nature to support great numbers. (Tracks shown on page 161.)

The Mule Deer *(Odoceileus hermionus)*

The Mule Deer of the Rocky Mountain States is similar in general to the smaller black-tail of the Pacific coast with which it is sometimes confused, under the same name, owing no doubt to the fact that it has a black-tipped tail. The "black-tail" is more of a forest deer. The most reliable recognition mark of the mule deer is the tail which is narrow and scraggily haired and white all around, becoming black only near the top. Unlike the black-tail the mule deer favors the more arid interior, and its range embraces the vast territory from Alberta and western Iowa south over the tableland to central Mexico. On the west its range meets that of the black-tail along the high mountains near the Pacific, reaching to the coast in southern California, and north-western Mexico. The buck is a fine showy animal, proud-spirited, carrying his evenly-forked antlers high. When alarmed this deer has a peculiar habit of bounding into the

1 2 3

1. White Tail.
2. Mule Deer.
3. Black Tail.

air, the fore and hind feet leaving the ground at the same instant in a series of astonishing leaps that at first seem to lack definite direction, and expose it to danger. (Tracks similar to those on page 161.)

The Prong-Horn Or American Antelpoe

(Antilocapra americana)

Unlike the antelope of the Old World, which are not close relatives, the American species has pronged horns, the outer covering of which is shed in the fall, leaving sharp, nearly straight, bony spikes. Owing to its bright coloration and exceeding grace of movement it may properly be regarded as the most beautiful of the larger American game animals. While in a short dash a fast horse may overtake an antelope, the horse is usually soon left far behind as the antelope settles into its stride at full speed over the plain. At the time of the discovery of the country the antelope numbered millions in the aggregate, like the buffalo, on the vast open plains lying between the mountain ranges from Alberta, Canada, south to near the valley of Mexico, and from Iowa west to California.

Owing to the settlement of the country, over-hunting, and inroads by predatory animals, the prong-horn has disappeared from most of its former range. According to recent careful estimates about 28,000 remain in the United States, of which about one-fourth are in Wyoming. They still occur, however, in 16 Western states and in places where accorded special protection, are increasing. (Examine similar tracks on page 161.)

THE BISON, SHEEP AND GOATS

The American Buffalo, Or Bison (*Bison bison*)

Buffaloes, in herds estimated at millions in the aggregate, formerly inhabited the vast area reaching from Pennsylvania west to the eastern base of the Sierra Nevada, and from the vicinity of Great Slave Lake, Canada, south at least to near the Mexican border. The buffalo was the most important game animal to various Western tribes of Indians which were thus afforded not only abundant food, but clothing, bedding, and tepee covers made of the skins. With the construction of the first transcontinental railroads their slaughter for the skins brought about such a rapid reduction in numbers that by 1895 it was estimated that only about 800 remained. Lovers of our wild life became alarmed by the threatened extermination of this former monarch of the plains and organized the American Bison Society to save it. There are well over 1,500 buffaloes in various Federal reservations including Yellowstone National Park, aside from which there are several notable private herds. To these may be added thousands in the various Canadian Government herds. There is one Canadian herd of undetermined size including the wild woodland buffalo on Peace River. The permanence of this splendid American animal, once threatened with extinction is thus assured, in fact, buffaloes are so numerous that it is necessary to remove some of the surplus from the reservations in the interests of the herds as a whole. (Tracks roughly similar to those on page 161, only larger.)

The Mountain Sheep

(Ovis canadensis)

The wild mountain sheep, sometimes known as the big-horn, inhabits the Rocky Mountains and other mountains of the west from British Columbia to northern Mexico. Some range in summer up above the limit of tree growth on the higher mountains, others remain throughout the year in low, rugged, desert ranges of the Southwest where cactuses, yuccas and century plants are abundant. But whether they live at high or low elevations, the sureness of foot exhibited and the amazing speed attained in headlong dashes up, down, or along slopes and over crags so precipitous that a slip would be fatal, leave a lasting impression on the climber who has startled a wild band. Owing to their keenness of sight, scent, and hearing, mountain sheep are difficult to approach. (Tracks comparable to those on page 161.)

The Rocky Mountain Goat *(Oreamnos americanus)*

The Rocky Mountain goat is the sole representative of its family in America. The humped shoulders, small horns and long shaggy white coat give it an ungainly appearance; and it moves comparatively slowly, lacking the dash and graceful abandon of the mountain sheep. Its home is along the cliffs and rugged upper slopes of timberline mountains from Alaska to Montana where it appears to be comparatively unmindful of winter storms. Under protection it should permanently remain an object of interest and delight to Alpine visitors. (Tracks comparable to those on page 161.)

SOME COMMON UNAPPRECIATED ANIMALS SCOUTS SHOULD KNOW

By E. LAURENCE PALMER (Cornell University)
(Drawings by Leonard Rossell)

Size and fierceness are not the only measuring sticks we should use in determining what animals Scouts should know. In fact, some of the animals which influence man most have neither great size nor great courage. Some of these smaller common animals are very useful in the services they render us, and some are highly destructive. In order that Scouts should act intelligently towards such animals as bats, moles, shrews, mice and rats, this section is included in this Handbook.

Among the most destructive creatures on earth are the insects. To be sure there are fortunately some useful insects. But in spite of this, there are injurious insects which fly high in the air; there are others that hide under loose leaves and rubbish, and there are still others that burrow deep in the ground. To assist in keeping these insects in control, Nature has enlisted the services of bats, shrews and moles. The bats, of course, capture the insects in flight; the shrews, those under the loose rubbish; and the moles, those underground or even under water.

The Bats

Bats are not birds, but have hair as we do and are classed as mammals. They are most unique mammals, however, because of their ability to fly. The fingers on the fore limbs are connected by membranes or webs, which make flying possible. The food of *our*

bats is exclusively insects, and this should speak highly in favor of bats. In some parts of the country, bats are given shelter so that they may function in the capacity of keeping down the number of injurious insects. The more bats, the fewer insects. It is doubtful whether any birds possess the marvelous control and precision of movement of some bats on the wing in turning or following zigzag in pursuit of insects.

There are, of course, many kinds of bats in the United States. Some of these fly south with the birds in winter, and some hibernate during the cold seasons like the chipmunks. Each species of bat seems to be active at a more or less definite time of day. Some, like the little brown bats, are active at early dusk, and others, like the hoary bats, are active during the darker parts of the night. Bats apparently have wonderful ability in detecting their food. They undoubtedly have exceptional senses of sight, hearing and feeling, and possibly of smell. To aid in these senses, some bats have most unique noses, and others, most unique ears. Bats capture their food while in flight. They may use the web between their tail and hind legs to assist in holding it for a brief time. In early summer, bats may not infrequently be found flying about with the young clinging to the mother's breast. There are generally two young, though occasionally there may be but one, or sometimes three. Bats of the species found in the United States unquestionably deserve more protection and encouragement than they usually receive.

The Shrews

Shrews enjoy the unique distinction of being the smallest living mammals. There are some shrews that are larger than certain other

animals, but the smallest living mammal is a shrew. Shrews are probably most frequently observed when the cat brings one home in the hope that there may be some reward for the capture of a mouse. The cat does not eat shrews unless hungry because of the fact that they have a strong odor and probably an unpleasant taste. The shrew is probably as useful to society as the cat if not more so, since most shrews live almost exclusively upon insects and other very small forms of animal life. Unlike moles, shrews have normally developed feet. Their eyes, however, are not conspicuous but their noses are. They do not burrow, but work along under the loose rubbish and not infrequently on logs and other material above ground. They are nervous, morose little creatures ready for a fight with anything no matter what its size may be. They are active the year round and may be active either in broad daylight or the darkest night.

Shrews of one species or another are found in most parts of the United States. They breed apparently at any time of year and may have five or more young. They are difficult to keep in captivity because of the demands they make upon the food supply and apparently because of their highly nervous temperament. Shrews can and do kill and eat mice, and if necessary will kill their own kind. Their usefulness is generally as unappreciated as is their abundance. Almost any Scout who has access to open country knows the type of country in which they live, though he may not know that shrews live there.

The Moles

Moles, like the shrews and bats, live almost exclusively upon insects and other small forms of animal life. Un-

fortunately their burrows are used by mice that feed upon garden vegetables and bring destruction upon the heads of the moles. Moles live most of their lives underground and to this end have developed unique digging forefeet and generally unique noses which are of value in digging and in detecting their food. The star-nosed molé that lives in wet places has an elaborately developed nose as its name implies. It swims readily and frequently. Moles are sightless creatures and may be like the bats, either of a social nature or decidedly unsocial, depending upon the species. They may breed once or twice a year and have from three to six young at a time. The young at birth are hairless and helpless. The pelts of the common moles have been used for various purposes, and the animals have been killed quite generally because of the fact that to man's eye they disfigure lawns and gardens. If they could be judged by the food they eat they would undoubtedly live much longer than they do, since from that standpoint they are unquestionably very useful.

The Mice And Rats

There are about one hundred and fifty kinds of rats and mice living in the United States. In a broad sense they probably serve as the "bread and butter" of the larger animal-eaters. Foxes, wolves, bob-cats and the like all will eat mice when nothing better offers itself. With the reduction in number of these larger animal eaters, mice have multiplied to such an extent that in many places they threaten the prosperity of the farmer's grain and of his orchard. For this reason there is every reason why Scouts should know about the ways of mice and do what can be done to keep their numbers within reason. Many snakes, most hawks and owls, skunks, weasels, and other com-

Brown Rat

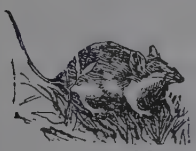
mon, frequently unappreciated animal-eaters contribute a genuine share of service in this connection, and should be given credit for this service. (For tracks see pages 157 and 158.)

Pine Mouse

Four general groups of rats and mice may be cited.

The Old World Rats And Mice—include the house mouse and common rat. The common rat is unquestionably the worst animal pest with which man has to contend. The property damage in one year by rats in England and Ireland outside the cities has been estimated at $73,000,000. House mice are also destructive to property. A pair of house mice and the offspring they produce in a year could in that year produce about 1,000 mice. These figures merely give a slight idea of the possibilities of destruction that lie in these common animals. It is infinitely greater and affects a greater number of people than the property damage of wolves, cougars and bears combined, though the manner of destruction is apparently much less dramatic.

Deer-mice, Wood-mice, Or White-footed Mice–are another group—those pretty, large-eyed creatures that make homes in abandoned birds' nests and are probably of some value as insect destroyers. The snows in winter are not infrequently generously peppered with their tracks which show a conspicuous tail mark. In the West are grasshopper-mice, which feed on grasshoppers. The harvest-mice are expert climbers and build nests in the branches of bushes, while the tree-mice live in tall forest trees.



White Foot Mouse

Grasshopper Mouse

Wood Rat

Wood-rats And Mountain-rats—though found in the East, are better known in the western part of the country, and belong to another group. They have larger eyes and ears and longer tails than the common rat and frequently live in caves and crannies in which they construct elaborate nests of sticks and grasses. The cotton-rat ranges in the South and one of the Central American rice-rats ranges as far north as New Jersey.

Meadow-mice And Field-mice—belong to still another group. They are generally short-tailed, short-eared little fellows, rather uniformly brown or grey. They destroy not less than $3,000,000 worth of farm products in a year, according to the U. S. Biological Survey. A single pair and their offspring could, in five years, produce about 1,000,000 mice, and this is a very conservative estimate. Their greatest destruction lies in the girdling and killing of fruit trees and in the destruction of forage grasses and grain. A thousand mice in a field would require about twelve tons of grass or other vegetation to maintain them for a year. The runways of meadow mice may be found in almost any meadow-land in the United States, and if followed will undoubtedly lead to a mouse nest which frequently lends itself to an interesting observation on the "habits" of at least one species of "wild animal."

Field Mouse

There are numerous other interesting small rodents such as jumping mice, the destructive and peppy pocket gophers, the prairie dogs, the mountain beavers and the pikas.

Requirement No. 11 (2)

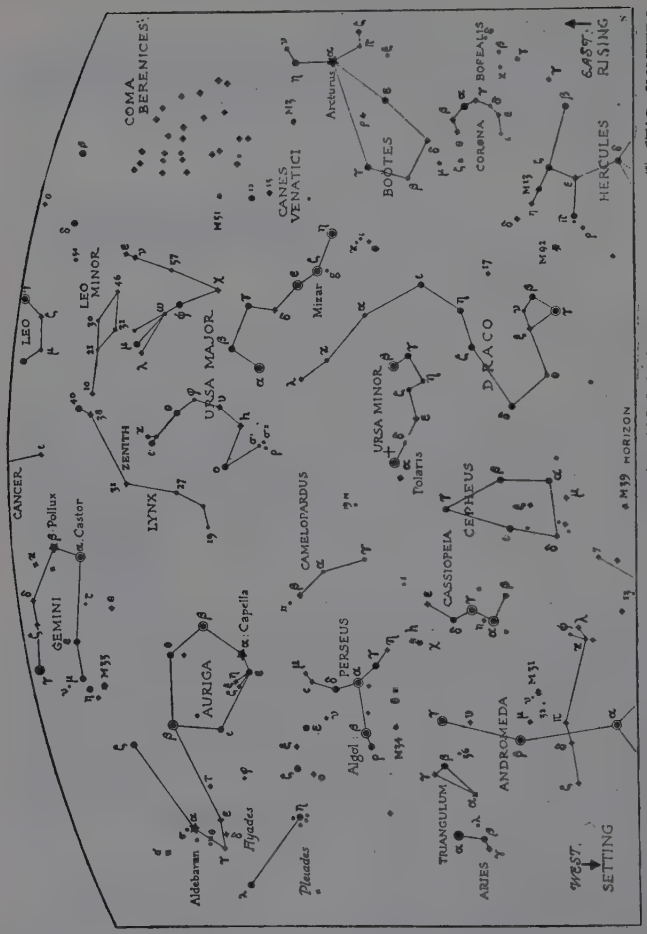
"2. Be able to point out the North Star, and be able to name and point out at least 3 constellations of stars."

This requirement must be met out-of-doors on clear nights.

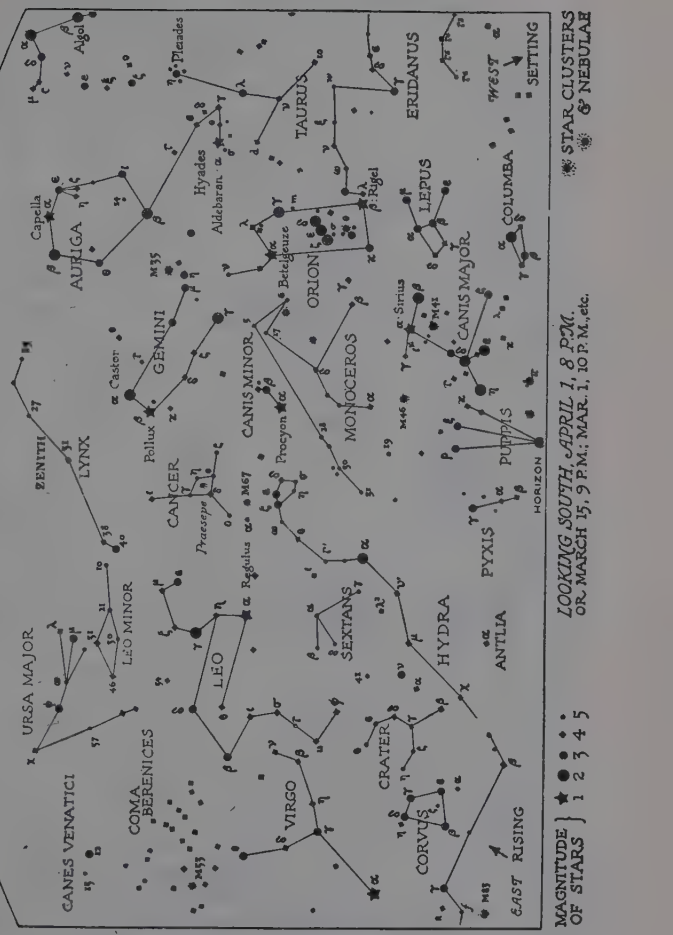
To find the North Star the first time, you must know where North is—there you can see the "Big Dipper" whose two end stars in the "bowl" point to the North Star. Once identified, thereafter it will tell you which way is north.

As Garret P. Serviss wrote:

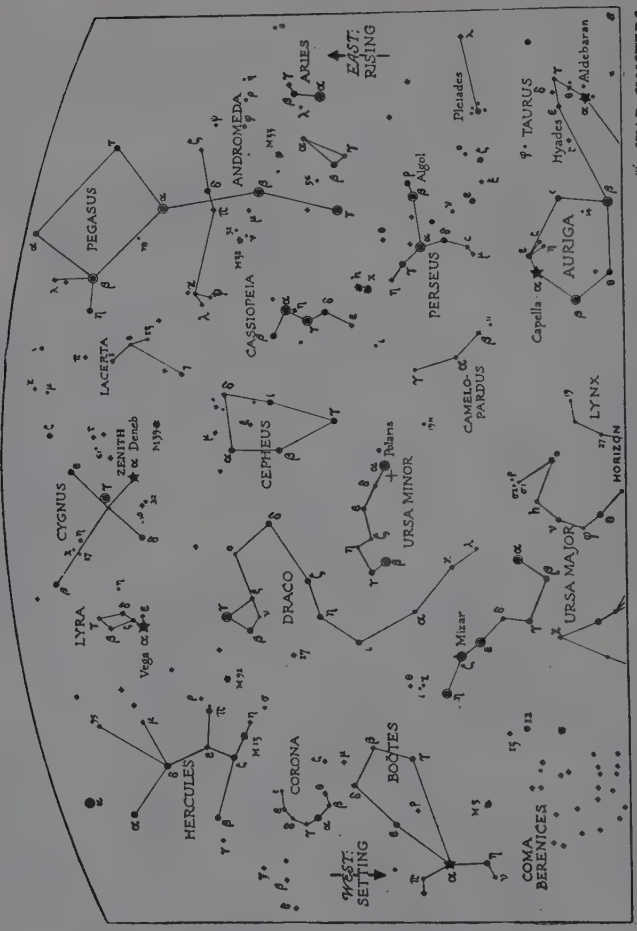
"Every boy ought to know the North Star, which for ages has been a sign-post in the sky, guiding wanderers by both sea and land. You can never be lost if you know that star, for it holds its place unchanging. It is within but little more than a single degree (about twice the diameter of the full moon), from the true North Pole of the heavens, around which it describes in 24 hours a circle so small that the motion is unnoticed by the naked eye. It is a surer guide to the north than the compass needle, because the latter points many degrees west of north in the eastern United States, and many degrees east of north in the western states. Only along a crooked line running from



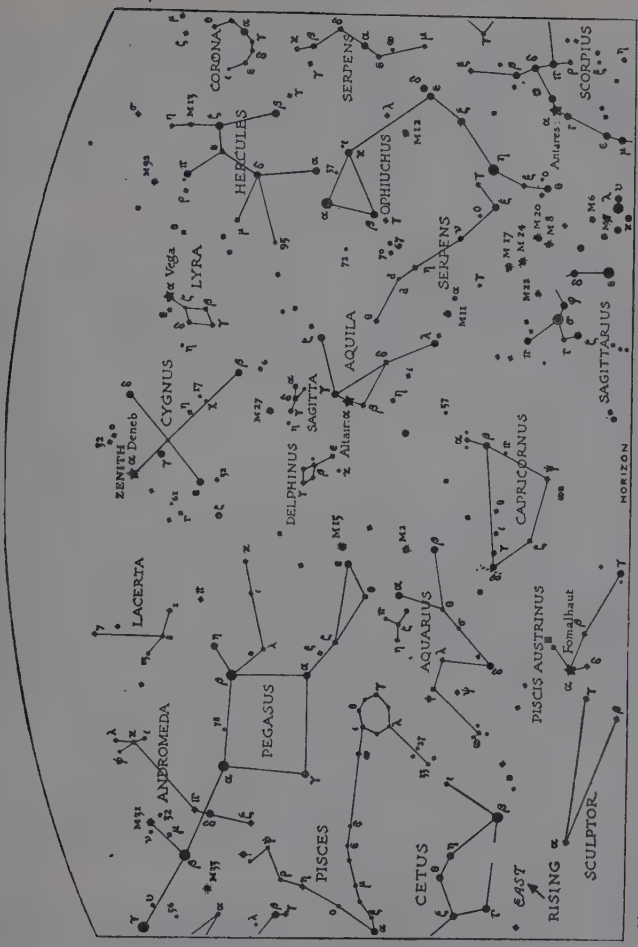
South Carolina to Lake Superior does the compass needle point true north. The amount of declination at any particular place may be ascertained from the magnetic charts published by the Geodetic Survey. See chart under Map Making, Chapter XV. After you have located the "Big Dipper," on the other side of the North Star, about as far away from that star as the Great Dipper is, you will see



the constellation Cassiopeia, which you can recognize very easily on account of the W-shaped figure formed by its stars. Cassiopeia and the Great Dipper swing around the pole every twenty-four hours, always keeping opposite to each other. They also gradually advance around it in the same direction with a slower motion, due to the earth's revolution around the sun, but this second motion is not noticed in the course of a single night's observation."



The North Star is almost directly above the axis of the earth, so if one stood at the North Pole with Peary, or Byrd, the "Pole Star" would be directly above your head in the Zenith, 90° above the horizon. At the Equator the North Star would be invisible, lying ex-



actly on the horizon. Actually its height above the horizon is the same as your latitude from the Equator. At Miami, Florida, it is only 26° above the horizon, at Seattle it is nearly 48° above, at Chicago it is 42°, as at Boston.

In very ancient times, the stars were worshipped. The sky was the first clock and as the motions of the earth changed the face of the sky—time and seasons were recognized. Chinese astronomic records antedate 2300 B. C. They assigned 365¼ degress to the circle, showing the influence of the solar year. The Egyptians laid out their pyramids and the beginning of surveying with their knowledge of the North and other stars. Once they had fixed the North and South line they used rope knotted with lengths 3, 4 and 5 to establish their right angles. Along the Euphrates, practical star observations were of record before 3800 B. C.

When you step outside on a clear night it is difficult to realize that every point of light you see in the heavens is a SUN, most of them bigger than our own and so far away that a new unit of distance has to be used —namely the "light year." Light travels 186,000 miles per second and that figure multiplied by the number of seconds in a year, gives the number of miles in a "light year." (Multiply it out and see if you can read it.)

The nearest fixed star is 200,000 times as far from the sun as is the earth (which is 93,000,000 miles).

Thousands of these stars or suns have satellites, smaller dark bodies, similar to our earth and the other planets circling our own sun.

Many bright spots in the sky, looking like a single sun, are in reality great clusters containing thousands of suns.

In the great MILKY WAY, suns and nebulae (great luminous clouds inconceivably far across) are thickly clustered together and with the North Star group will serve not as a land-mark but as a sky-mark to every Scout.

These stars shine by their own light like our sun. The eight planets, like our own moon, shine by reflected light—reflected from our sun. Any almanac will tell you which of the planets are visible at any time.

THE FOLLOWING TABLE GIVES THE VITAL FACTS:

	Diam. miles	Distance from sun millions of miles	Orbital velocity per. sec. miles	Relative size	Relative distance
Sun	865,350	.....	(13.5*)	If sun were 2 ft. globe	
Mercury	2,765	36.	29.0	Mustard seed	164 ft. distant
Venus	7,826	67.2	21.9	Pea	284 ft. distant
Earth	7,913	92.9	18.5	Pea	430 ft. distant
Mars	4,332	141.5	15.0	Pin head	654 ft. distant
Jupiter	87,880	483.3	8.1	Orange	1/2 mi. distant
Saturn	73,125	886.	6.0	Lemon	4/5 mi. distant
Uranus	34,900	1781.9	4.2	Cherry	1 1/2 mi. distant
Neptune	32,900	2791.6	3.4	Plum	2 1/2 mi. distant

Within the orbits of Mars and Jupiter is a space where there are the asteroids, small bodies which act as a broken up or exploded planet might act. They circle the sun in the same way.

Our neighbor planet (and twin) Venus has an atmosphere. Mercury has none, as the gravitational pull of the sun has stolen it. Mercury's heat from the sun is 6.8 times as much, while Neptune, on the other extreme, is only 1-1000th that of our own.

Comets are swarms of minute particles of matter which have great orbits. They come falling in toward the sun at great accelerating speeds and then fly off, slow down and start back. The heads are often millions of miles across—but they do not have much mass. Indeed the material in the tails is so thin that the repulsion of light forces the tail away from the comet. Indeed the comet's tail always points away from the sun—is behind it as it comes toward the sun and goes ahead as it retreats.

These must not be confused with meteors or so-called "falling stars," which are not stars but are small

* Taking all other planets with it.

Badge subjects are wide open doors. Merit Badge Counselors offer friendly counsel, while the Librarian is ready to supply books to help the Scout grow and progress.

"On my honor, I will do my best . . . . . ."

CHAPTER XVI

LIFE SAVING

Note—Life saving is not a requirement for becoming a First Class Scout—every Scout, however, will want to "Be Prepared." For that reason the following pages have been included.

Life Saving By Scouts

Out of the experience of Scouts in saving thousands of lives from drowning, a few first principles have become clear.

1—Use Some Equipment—a buoy. a rope, a stick, a board, a shirt, a boat. Most drowning accidents occur within a few feet of safety. A call for help and a quick glance at nearby objects which may be used to pull the person to the shore—these are the first steps. In using a boat for rescue turn the wide stern to the subject as

he is less likely to tip the boat. If outboard motor is on, of course, use the bow to avoid injury to the subject from the propeller.

2—Swimming In Is A Last Resort—The use of equipment is surer and safer to both.

3—Disrobe—when swimming in is necessary, time spent in quick disrobing is time well spent. Leaving clothing and shoes on will slow down the swimmer and probably water log him so that he is in danger himself. The Swimming Merit Badge pamphlet shows how to disrobe in 20 seconds. The Scout should practice. Disrobing each night provides the chance to develop speed.

Learn to Disrobe in 20 Seconds

4—Enter The Water Feet First—leaping high, wide and open. Logs, rocks, and varying depths changing with each freshet make head dives most dangerous. Then too, the rescuer should not lose sight of his subject for long.

5—Keeping Cool Is Essential—it is good sense. One can act quickly without getting nervous. Over 50% of the persons who go down have some swimming ability and need only a bit of help—a push toward shore or aid to get into a swimming position from the standing position in which they struggle. Courage is not a blind rash rush. It is seeing what needs to be done and then doing it quickly but carefully and with skill based on practice.

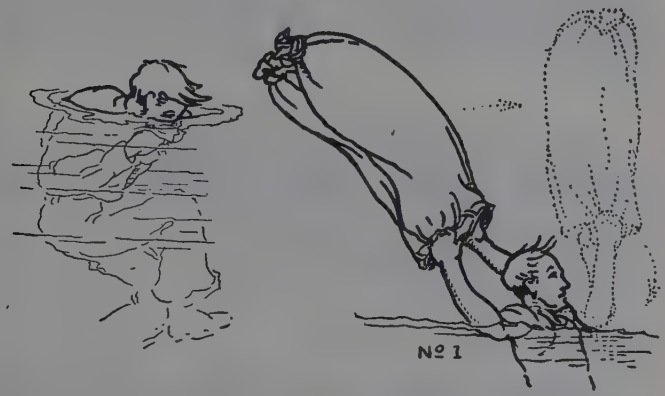
6—"Shirt Tail" Life Saving—A shirt makes a good tow rope. It may be removed and held in one's teeth while swimming out—then holding the neck it is swung within reach of the person in trouble, who can grasp with both hands and be towed to safety, keeping him at safe distance by a shove with the foot if necessary.

A cotton shirt will fill with air as one jumps and can be held at neck and front—in fact more air can be blown in between the second and third buttons. Its buoyancy will support its wearer.

Rescuer removes shirt and places back of collar in his teeth—shoes come off at same time—then trousers are dropped and kicked free. Watches subject constantly. He makes a running jumping entry and swims out carrying shirt in teeth. Grasps neck of shirt in one hand and flips its tail into hands of subject. Subject grasps shirt in both hands and is towed to safety. Should he attempt to get at rescuer to seize him he would be shoved away with foot.

An Inflated Shirt is Buoyant

7—Cotton Pants "Balloon"—A pair of cotton pants (not wool) if fully inflated can support four people. Bottoms must be tied snugly, inflate by swinging and by blowing.



Not only cotton pants but also a Scout shirt may be used. See page 390. A shirt can be inflated while in the water by blowing air in between the second and third button from the top. Trousers can be removed, tied, and inflated while in the water as illustrated, with a forward flip (Fig. 1) and then if necessary by blowing up from underneath (Fig. 2).

8—Keep clear of a struggling person—in the water as you would on shore. Dodge or block his hands or push him away. Keeping out of reach will also prevent being kicked or clawed. Make your approach from the rear if possible, taking hold and towing. However, should you be grasped take a deep breath and submerge. They will let go.

9—Caring For One's Self In The Water— depends on one's skill in the water and on one's physical fitness. Those suffering from heart disease, epileptic fits and fainting spells may expect more trouble when in the water than when on land.

To care for one's self in water means more than having a good stroke and proper breathing—it necessitates ability to rest in water, to float. Floating should be mastered.

Pages 209 and 394 suggest how to float.

10—Boat Safety—is not difficult if people don't get panicky. Scout back-packs should always be taken off and placed in the bottom of the boat. If an accident occurred the packs would prove too much weight. Rowboats, canoes and most outboard motor boats even though full of water will still support all the people in them (and more), if boat is kept right side up and passengers hold on to the boat's sides. Stay with the ship!

8 RESCUED WHEN BOAT UPSETS

Canoe Upset Fatal

Special to the World-Telegram.

LAKE GEORGE, N. Y., Aug. 10.—Philip Barbarulo, 25, of West Orange, N. J., was drowned here yesterday when his canoe overturned. With him were William Skinner of West Orange and Anthony Cappuccino of

FATHER'S BOAT UPSETS

Davenport Daily-

Cling to Craft For Two Hours In Rough Water

N. Y. Post, July 3, '39

3 Sisters Die Arm in Arm As Skiff Sinks on Outing

Fourth Girl Saved as Current Sweeps Her to Bank of River

WEST NEWTON, Pa., July 3 (AP).—Linked arm in arm, three sisters who couldn't swim leaped from a sinking skiff and drowned in the treacherous rain-swollen Youghiogheny River yesterday.

Cadet Is Drowned at West Point As Hudson Squall Upsets Canoe

Special to the Herald Tribune

WEST POINT, N. Y., May 28.—A sudden squall that swept up the

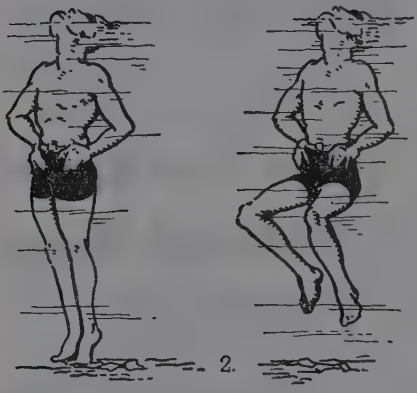
The two cadets had paddled and drifted to a point opposite Garrison, across the river from the academy,

Floating

1. To Test Buoyancy. Take and hold deep breath. Slowly lower head and raise knees. If any part of body or head remains visible you can float.

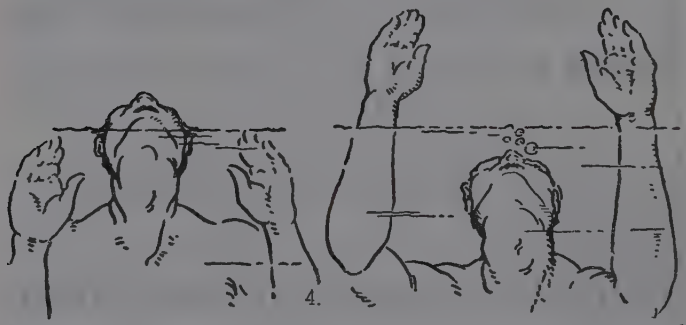
2. Stand on bottom. Chin stretched high. Take deep breath. Slowly raise feet. You are afloat!

1.



2.

3.

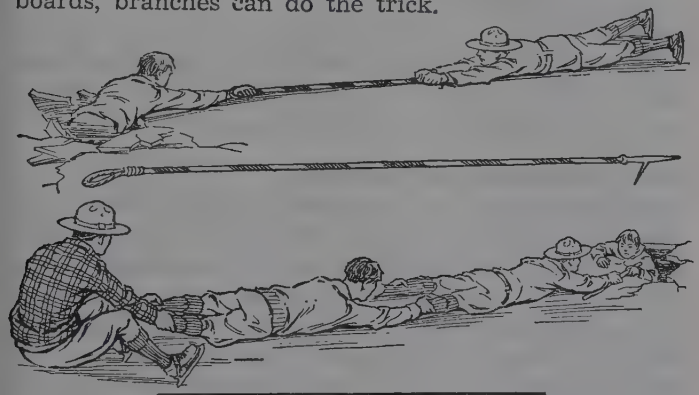


4.

3. Chin high, eyes almost submerged. Breathe out quickly and in even quicker through mouth.

4. If hands are raised above water, head goes down. If lowered, head comes up. Most boys and men float in upright, not in flat position on back. Keep hands under water.

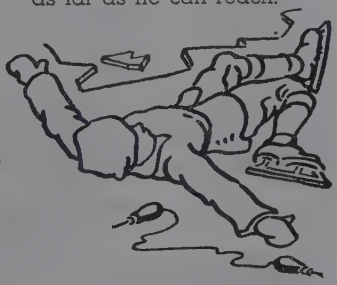
11—Ice Rescue—Here also the method is to use some equipment as illustrated below. Avoiding thin ice is the first bit of good sense. Ropes, ladders, sleds, sticks, boards, branches can do the trick.



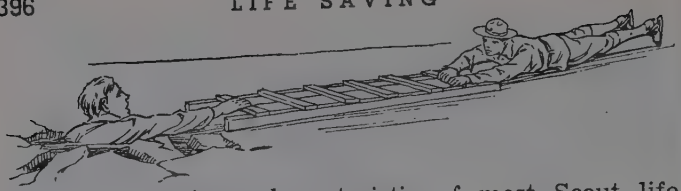
1. Through the ice!

2. Ice awls removed from pockets and driven into ice as far as he can reach.

3. Pull self forward quickly until waist high. Bring one leg over ice. **"Hurry, the ice is bending."**



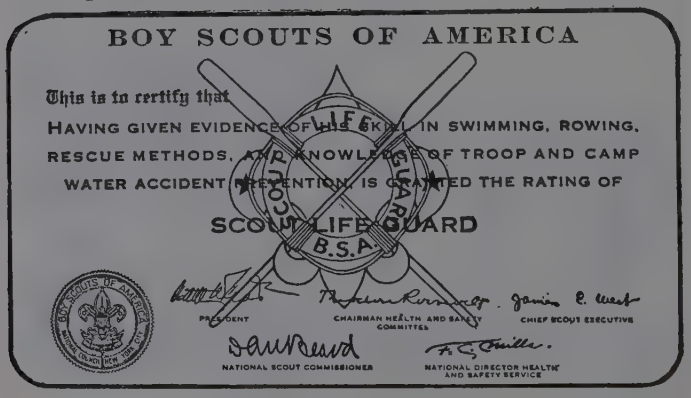
4. Starts a quick roll at full length away from hole to stronger ice.



12. Modesty is a characteristic of most Scout life savers. After doing a real job, many a Scout rescuer has slipped quietly away without being identified.

Scout Life Guard Requirements

Although only First Class Scouts are eligible for Scout Life Guard Certificates the fact that Scouts can grow up with the requirements will encourage many a boy who can't find time in one summer's camp period to go the entire route. The various Merit Badge requirements may be earned over a period of years as the boy advances. When all are completed and he is awarded his Scout Life Guard certificate (without cost), and the emblem which is unusually good looking (if he wishes to purchase it), he will have the satisfaction of knowing that he has demonstrated real ability by passing a set of difficult requirements, and has made a great start toward becoming an outstanding waterman. As far as we know, there is no other equal life saving training for any group except the professionals.


BOY SCOUTS OF AMERICA
This is to certify that
HAVING GIVEN EVIDENCE OF HIS SKILL IN SWIMMING, ROWING,
RESCUE METHODS, AND KNOWLEDGE OF TROOP AND CAMP
WATER ACCIDENT PREVENTION, IS GRANTED THE RATING OF
SCOUT LIFE GUARD
LIFE GUARD
B.S.A.
PRESIDENT
CHAIRMAN HEALTH AND SAFETY COMMITTEE
CHIEF SCOUT EXECUTIVE
NATIONAL SCOUT COMMISSIONER
NATIONAL DIRECTOR HEALTH AND SAFETY SERVICE

Those Scouts holding either Red Cross Junior or Senior Life Saving Corps certificates receive credit, but that is not required if they have their Life Saving Merit Badge.

The standards of examination will be held high and any part of the test may be subject to review when the final work is taken.

The Requirements

1. Present medical examination certificate of physical fitness.

2. Swim one-quarter mile in good form using, any or all the following strokes: side, back, breast or crawl.

3. Hold the Merit Badge for Swimming.

4. Hold the Red Cross Junior or Senior Life Saving Certificate *or* hold the Life Saving Merit Badge.

5. a. Demonstrate twice his ability to remove (except underpants or bathing trunks) street clothes in 20 seconds or less. b. Watching "struggling" person constantly, remove street clothes on shore in 20 seconds, enter water feet first (by jumping or running), swim 30 feet, make correct approach, and tow victim 30 feet with cross-chest carry to shore.

6. Hold the Merit Badge for Rowing.

7. Throw 15-inch ring buoy equipped with 60 feet of 3/16 inch line between two marks 5 feet apart, 30 feet from throwing mark three times in one minute, re-coil, and leave ready for use.

8. Acting as coxswain of a life boat and using a pole, with a skilled oarsman rowing, approach a "struggling" person correctly, hold him at stern until rowed ashore and then assist him out of the water.

9. Instruct one First Class Scout for three hours in the Merit Badge Requirements in Rowing, or Canoeing, or Life Saving; *or* instruct one non-swimmer for three hours in swimming.

10. Answer ten questions selected by Counselor from the list of questions or problems on safety and rescue methods.

11. Explain the plan for protecting a Troop swimming party, and, with two other Scouts, one acting as a drowning person, demonstrate the rope rescue method described in the plan.

12. Know and be able to explain plan of Camp Waterfront Protection, including Buddy and Check Plan.

Artificial Respiration

Save the seconds and we have a better chance of saving the life. Don't waste time carrying victim to a quiet spot. Work where he was taken from the water. Waste no time trying to get the harmless water out of the stomach. Turn subject face down and go to work instantly.

Don't Give Up—Place the hands just below subject's shoulder blades, four inches apart, with palms turned forward, and thumbs outward. Scrape edges of hands back toward pelvis until they stop.

Move weight of body slowly downward and forward for about three seconds—don't slide, don't bend arms. Keep arms straight. The shoulders should be behind the hands, so that the pressure is exerted forward. Snap hands off allowing the lungs to fill with air. Swing slowly backward to an upright position, as shown, thus relaxing the muscles of the back. At the end of two seconds, again place the hands in position and apply pressure.

To assist in properly timing these movements, repeat either silently or aloud during the period of pressure "out goes the bad air," then snap off hands and repeat during the period of release "in comes good," or count slowly 1, 2, 3 for pressure, and 4, 5 for release, one count for each second.

PART
V
MERIT BADGE
PROGRESS

EQUIPMENT

By Edgar A. Guest

Figure it out for yourself, my lad,
You've all that the greatest of men have had,
Two arms, two hands, two legs, two eyes,
And a brain to use if you would be wise.
With this equipment they all began,
So start for the top and say, "I can."

Look them over, the wise and great,
They take their food from a common plate
And similar knives and forks they use,
With similar laces they tie their shoes,
The world considers them brave and smart.
But you've all they had when they made their start.

You can triumph and come to skill,
You can be great if you only will,
You're well equipped for what fight you choose,
You have legs and arms and a brain to use,
And the man who has risen great deeds to do
Began his life with no more than you.

You are the handicap you must face,
You are the one who must choose your place,
You must say where you want to go.
How much you will study the truth to know,
God has equipped you for life, but He
Lets you decide what you want to be.

Courage must come from the soul within,
The man must furnish the will to win,
So figure it out for yourself, my lad,
You were born with all that the great have had,
With your equipment they all began.
Get hold of yourself, and say: "I can."

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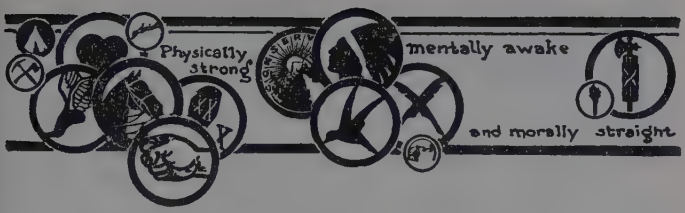


CHAPTER XVII

THE MERIT BADGE PROGRAM— AN OPEN DOOR

Scout Merit Badges are open doors of exploration and discovery. While they are part of the advancement to Star, Life, and Eagle ranks and Eagle Palms, they are much more, because they lead the Scout to discover his own interests and to plan his own life.

The Man Who Knows

"The man who knows" is called for by the modern age. These Merit Badges mark a trail into more than a hundred interests, hobbies and possible life work explorations.

While they are called Merit "Badges", they are really exploration units of adventure in knowing and doing. The reason for the badge is service. It marks its wearer as "prepared" and ready to help with Life Saving or Pioneering, Foundry Work or Gardening, Plumbing or Interpreting.

Merit Badge Pamphlets Or Guides

For each Merit Badge subject there has been prepared a pamphlet or guide to help the Scout to explore that subject. This includes lists of recommended books on the subject and also, in most cases, gives facts

and sources of further information about a life work in that field. They constitute a great library in small space.

Merit Badge Counselors

An important opportunity which this great Merit Badge Program offers Scouts is the chance to meet and know a man who is a leader in any of the subjects. If the Scout wants to explore electricity or radio, corn farming or chemistry, the Scout Local Council gets a public-spirited leader in that field to meet the Scout, advise him and certify when the requirements have been met. Here is an almost unbelievable chance, which often money could not buy—a chance to make friends with such men and benefit from their successful experience.

Reading On Merit Badge Subjects

The Scout can explore yet more fully into any Merit Badge subject by reading about it. There is hardly any subject on which there are not books and even periodicals, full of interesting ideas and new developments. A Reading Merit Badge points the trail to go on farther into any subject. The local librarian will help with lists. The National Council issues special lists. Counselors will suggest and sometimes lend books or magazines, while each Troop which has started the official Reading Program in the Troop will be helping each Scout to make just such reading contacts. All this is ready for each Scout to use.

Merit Badge Requirements

The Merit Badge Requirements for each of the more than one hundred subjects are outlined in the appendix to this book.

Reproduction in color of each Merit Badge is found in the color section.

CHAPTER XVIII

FINDING ONE'S LIFE WORK

A Scout looks ahead. He prepares for things before they happen. He therefore meets them easily.

As he looks ahead, EVERY SCOUT must face the problem of his life work.

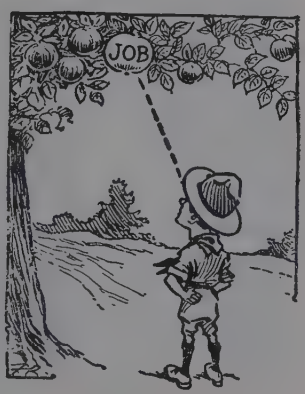
Will he become a farmer or a clergyman, a forester or a clerk, an engineer or a writer, an artist or WHAT?

The apple in the picture tells the story. Some climb up—choose, prepare, qualify. Some wait—hope, change, take what comes.

"The heights by great men reached and kept, were not attained by sudden flight; but they, while their companions slept, were toiling upward in the night." —*Longfellow.*

The Scout can do three things:

1. Ask information about various jobs.
2. Try the Merit-Badge opportunity.
3. Talk it over with older people.



Also the Scout who looks ahead will form friendships with successful men from vocations which in-

terest him and begin, while still at school, to learn more of how he can serve the world through the job that is to be his. And that's what all honest jobs are—doing things for other people.

The following lists of Merit Badges show those that are of special value in the life work mentioned.

ARTIST
Art
Architecture
Cement Work
Indian Lore
Landscape Gardening
Leathercraft
Leather Work
Metal Work
Music
Painting
Pottery
Photography
Reading
Sculpture
Stamp Collecting
Woodcarving
Wood Turning
Wood Work

CRAFTSMAN
Art
Basketry
Bookbinding
Carpentry
Cement Work
Foundry Practice
Handicraft
Indian Lore
Leathercraft
Machinery
Masonry
Metal Work
Painting
Photography
Pioneering
Plumbing
Pottery
Printing
Sculpture
Stamp Collecting
Taxidermy
Woodcarving
Wood Turning
Wood Work

DOCTOR
Chemistry
Dairying
First Aid
First Aid to Animals
Life Saving
Personal Health
Physical Development
Public Health
Reading
Safety
Weather

EDUCATOR
Agriculture
Art
Astronomy
Athletics
Bird Study
Botany
Chemistry
Civics
Conservation
Firemanship
First Aid
Handicraft
Indian Lore
Music
Photography
Public Health
Reading
Safety
Scholarship
Stamp Collecting

ENGINEER or MACHINIST
Architecture
Automobiling
Aviation
Blacksmithing
Carpentry
Chemistry
Electricity
Foundry Practice
Machinery
Masonry
Mining
Pioneering
Plumbing
Radio
Safety
Surveying

FARMER
Agriculture
Animal Industry
Automobiling
Beef Production
Bee Keeping
Blacksmithing
Carpentry
Cement Work
Citrus Fruit Culture
Corn Farming
Cotton Farming
Dairying
Farm Home and Its Planning

Farm Layout and Building Arrangement.
Farm Mechanics
Farm Records and Bookkeeping
First Aid to Animals
Forestry
Fruit Culture
Gardening
Handicraft
Hog & Pork Production
Insect Life
Nut Culture
Pigeon Raising
Poultry Keeping
Sheep Farming
Soil Management
Weather
Zoology

FORESTER
Agriculture
Angling
Astronomy
Bird Study
Botany
Camping
Canoeing
Conservation
Cooking
First Aid
Forestry
Gardening
Hiking
Insect Life
Life Saving
Pathfinding
Pioneering
Reptile Study
Rowing
Safety
Signaling
Surveying
Swimming
Weather
Zoology

LAWYER
Business
Civics
Conservation
Journalism
Public Health
Reading
Safety

MERCHANT
Art
Business
Interpreting
Journalism
Chemistry
Civics
Indian Lore
Printing
Reading
Salesmanship
Stamp Collecting
Textiles

NATURALIST
Agriculture
Angling
Astronomy
Bee Keeping
Bird Study
Botany
First Aid to Animals
Forestry
Gardening
Indian Lore
Insect Life
Photography
Reptile Study
Stalking
Taxidermy
Zoology

OUTDOORSMAN
Angling
Archery
Camping
Canoeing
Cooking
Conservation
First Aid
Forestry
Hiking
Pathfinding
Pioneering
Rowing
Stalking
Swimming
Weather
Zoology

SEAMAN
Angling
Canoeing
First Aid
Life Saving
Radio
Reading
Rowing
Seamanship
Signaling
Stamp Collecting
Swimming
Weather

Senior Scout Titles

In the Senior Scout Handbook, "Adventuring for Senior Scouts", Chapter III, there are outlined certain Scout Titles, — Scout Artist, Scout Craftsman, Scout Artisan, Scout Naturalist, Scout Seaman, Scout Sportsman, Scout Woodsman, Scout Radioman, Scout Journalist, Scout Citizen.

Comparing Vocations

In Chapter XXV of "Adventuring for Senior Scouts", are outlines for comparing one vocation with another. Also in the Appendix, are analyses and facts concerning a dozen. Chapters XXVI and XXVII will prove very helpful. To the Scout with mechanical abilities and interests, the suggestion may be offered that the great number of young men desiring so-called white-collar-jobs has created a need (and hence a demand) for men skilled in mechanical trades. Also since this machine age has developed machines everywhere, in homes, farms, industry, commerce, mining—mechanical skills are increasingly in demand. Starting in such work instead of in clerical tasks, is no bar to progress toward management. President Atterbury of the Pennsylvania Railroad started as a wiper in a round house.

THE COMER

BY EDMUND LEAMY

He may be now an office boy,
A messenger, or clerk,
The smallest paid in the employ
Of him who gives him work;
But if he toils with willingness,
And wears a cheery grin,
He's on the roadway to success,
That chap is bound to win!

No power can keep that fellow down;
He'll leave them all behind
The higher paid who leer and frown
And tell him he is blind
To do more than he's paid to do
And not to ever shirk;
Who say: "At five o'clock I'm through
With miserable work!"

Not long he'll be an office boy;
Employers quickly see
Who works because the task is joy
And not just for his fee;
And others too will help him climb
To far heights of success—
Wealth will be his, and fame, in time,
Who works with willingness.

CHAPTER XIX

STAR—LIFE—EAGLE AWARDS

"First Class Scouts and Scouters who meet the requirements herein stated for Star, Life or Eagle Scout Rank, or for the award of Eagle Palms, may receive such award only when the local Committee on Advancement secures, in such manner as it may determine wise, from those who may be in a position to know from personal knowledge, not from the Scout himself, but from the parents, school teacher, employer, pastor, Sunday school teacher, Scoutmaster, member of his Troop Committee or others, definite, concrete, satisfactory evidence that the Scout has:

"First, actually put into practice in his daily life the ideals and principles of the Scout Oath and Law, the Motto 'Be Prepared,' and the 'Daily Good Turn.'

"Second, maintained an active service relationship to Scouting.

"Third, made an effort to develop and demonstrate leadership ability."

The Star, Life and Eagle Ranks are respectively the highest steps in Scout advancement. Those who attain these honors, of necessity, should be real Scouts, rep-

resentative Scouts—Scouts on the inside as well as on the outside.

The National Council, therefore, requires that the Committee on Advancement before conferring these awards shall positively know

1) That the Scout is living up to his Oath and Law and Motto and Good Turn. So important is this that they are instructed to secure specific evidence from the Scout's associates.

2) The Scout to be honored with these high ranks in Scouting must, of course, continue actively a part of Scouting in his Troop relations.

3) The challenging need of America is leadership—people who have ability and reliability enough to carry responsibility in business, in government, in church, everywhere. Leadership can only be learned by leading. Scout offers the opportunity to get this experience. Each Scout should use it by making an earnest, though modest, effort to serve through giving leadership to such activities and work and Good Turns as his own leaders deem wise. To help rather than merely to lead, is the ideal.

How To Become A Star Scout

"For the Star Scout Award:

"1. His record of satisfactory service, as a First Class Scout, shall have been for a period of at least three months; and

"2. He shall have qualified for any five Merit Badges."

---

1) This service, during three months as a First Class Scout, has afforded the Scout the chance to live

the Scout Ideals, as indicated in the first pages of this Chapter.

These things are the heart of Scouting because they are the very heart of good citizenship.

2) In selecting the first of five Merit Badge subjects the Scout should examine the list on the preceding pages in Chapter XVIII, mark those of interest, find the requirements in the Merit Badge Section in the Appendix, get the Merit Badge Pamphlet and start forthwith to master the first one. Each badge when qualified for should be entered on the Eagle Scout Score Board, page 411.

He should consult the local city library, a local leader in the field in question, his Scoutmaster, the Merit Badge Counselor, the local Committee on Advancement—all these stand ready to help him get knowledge and develop skill.

How To Become A Life Scout

"For the Life Scout Award:

"1. His record of satisfactory service as a Star Scout shall have been for a period of at least three months; and

"2. He shall have qualified for ten Merit Badges, which shall include

1. First Aid.
2. Physical Development or Athletics.
3. Personal Health.
4. Public Health.
5. Life Saving or Pioneering or Safety."

To become a Life Scout, the Star Scout shall

1) Serve in his Troop, and live the Scout principles day by day

for not less than three months. (See same requirement under Star Scout).

Emerson's idea is true, "What you are shouts so loud, I cannot hear what you say." What the Scout IS determines his progress in whatever line of business he may seek success—and Scout Ideals mean progress in business.

2) Five more Merit Badges are needed to advance from Star to Life Scout rank—but the total ten must include the five listed. The alert, keen Scout will go much more deeply into the subjects than merely to master the requirements.

How To Become An Eagle Scout

"For the Eagle Scout Award:

"1. His record of satisfactory service as a Life Scout shall have been for a period of at least six months.

"2. He shall have qualified for twenty-one Merit Badges, which shall include

1. First Aid.
2. Life Saving.
3. Personal Health.
4. Public Health.
5. Cooking.
6. Camping.
7. Civics.
8. Bird Study.
9. Pathfinding.
10. Safety.
11. Pioneering.
12. Athletics or Physical Development."

My Eagle Scout Score Board

Eagle Scout Requirements To become an Eagle Scout

Name _____ Score Board

FOR ME TO BE AND DO

I Service as a Life Scout. (at least 6 months)
Practicing the Oath, the Law, the Motto, the Good Turn

II Earnestly trying to develop leadership ability

III Qualify for 21 Merit Badges

1	First Aid	Passed on _____ Date
2	Life Saving	Passed on _____
3	Personal Health	Passed on _____
4	Public Health	Passed on _____
5	Cooking	Passed on _____
6	Camping	Passed on _____
7	Civics	Passed on _____
8	Bird Study	Passed on _____
9	Pathfinding	Passed on _____
10	Safety	Passed on _____
11	Pioneering	Passed on _____
12	Athletics or Physical Development	Passed on _____ Passed on _____
13	Swimming	Passed on _____
14	_____	Passed on _____
15	_____	Passed on _____
16	_____	Passed on _____
17	_____	Passed on _____
18	_____	Passed on _____
19	_____	Passed on _____
20	_____	Passed on _____
21	_____	Passed on _____

Badge Conferred on _____

Signed _____ Scoutmaster

(1) A record of six months' satisfactory Scout service involving the practice of the Oath and Law, the Motto and the Daily Good Turn and in accordance with the principles set forth at the opening of this Chapter. The Life Scout may begin work on his additional Merit Badges for Eagle Rank. He must serve six months, however, and qualify for the full number of Badges required before his Scoutmaster may make application on his behalf for Eagle Rank.

The highest rank in Scout progress is the Eagle. To him come many new opportunities. Eagle Scouts help the Scoutmaster conduct the Troop, as Patrol Leaders, Senior Patrol Leaders, and Junior Assistant Scoutmasters and Assistant Scoutmasters.

The Eagle candidate is urged to try to help in similar fashion in church and home and school activities.

(2) Anyone examining the twelve required subjects for Eagle Rank sees at once that they lay a broad base of ability to take care of one's self and of others under outdoor and unusual conditions. Such skills have great value in times of emergency when resourcefulness and knowing how to carry on are called for. Scouts have always been found eager and prepared to accept responsibility both in local and national emergencies.

A Scout will direct his course through life by the Scout Compass:

1. North is "Duty to God."
2. East is "Duty to Country."
3. South is "Duty to Others."
4. West is "Duty to Self."

Eagle Palm Awards

The Eagle Scout who meets the requirements for five Merit Badges, in addition to the twenty-one required for Eagle Scout Rank, may be awarded a Bronze Palm; for ten, a Gold Palm; for fifteen, a Silver Palm; for twenty or more such combinations of Bronze, Gold or Silver Palms as he may elect, to indicate the number for which awards have been made; provided, however, that no award of Palms may be made for more than five Merit Badges at any one time, and provided further that no award shall be made until after at least six months' satisfactory service as an Eagle Scout, as provided for in Clause 1 herein,* and that subsequent awards may be made for intervals of not less than six months' service following the previous award.

A Scout may elect to use any combination of the Bronze, Silver or Gold Palms to indicate the number for which awards have been made.

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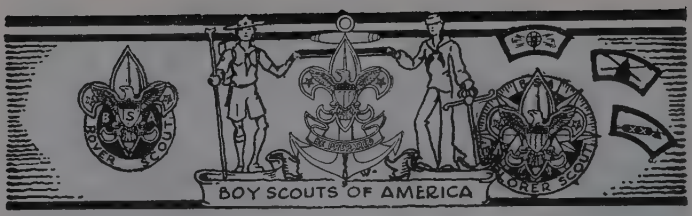
*See opening of this Chapter.



CHAPTER XX

SENIOR SCOUTING

Scouting is a way of living open to young men as well as to those of the earlier 'teen years. In addition to the almost unlimited activities of the Troop Program, special opportunities have been provided for those over 15 years of age. Special groupings of Merit Badges and their skills await the Senior Scout as titles: Scout Artist, Scout Craftsman, Scout Artisan, Scout Naturalist, Scout Seaman, Scout Sportsman, Scout Woodsman, Scout Radioman, Scout Journalist, Scout Citizen.

Any Scout 15 years of age or over is entitled to become a Senior Scout and to wear the special membership strip over his pocket—"Senior Scout B.S.A." As a matter of fact there are some 300,000 young men 15 years of age and over on the active rolls of the Boy Scouts of America. A special handbook, "Adventuring for Senior Scouts," has been prepared and outlines programs and plans and expeditions for Troop Senior Scouts, Explorer Scouts and others.

A number of alternatives open up to the Senior Scout—who, by the way, should consult with his Scoutmaster as to becoming a Senior Scout.

1. Carry On In The Troop

The Senior Scout may carry on in the Troop as before, probably carrying added responsibility. He may

go on as Junior Assistant Scoutmaster, Assistant Scoutmaster and later become a Scoutmaster.

2. Explorer Scouting

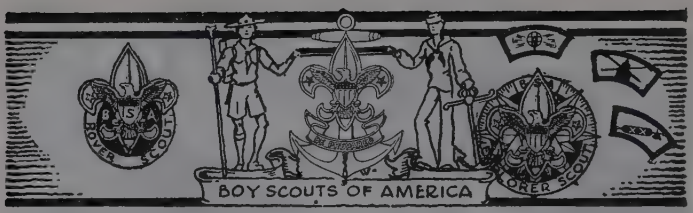
The Senior Scout may wish to take up Explorer Scouting, which, as its name implies, is advanced Scouting and service expeditions into woods and wilderness. It is the land brother of Sea Scouting. The Scout learns his outdoorcraft—the Explorer Scout uses it in wider adventures.

In almost any fair-sized Troop there will be a small group of older fellows—"Seniors"—who, in consultation with their Scoutmaster, may form a special Patrol in the Troop. Explorers, in addition to adventure and exploration and special Merit Badge opportunities, carry on meetings, debates, social gatherings and life work explorations. Explorer Scouts may qualify for special Emergency Corps Service through training and cooperation with the Council Health and Safety Committee. They may wear the Explorer Scout Badge and a special membership strip—"Explorer Scout B.S.A."

3. Sea Scouting

The Senior Scout may be attracted to the lore of the sea, the colorful ceremonies and Uniform, the Bridge of Honor and other fine social training and traditions of the naval officer. If so, Sea Scouting offers its program of seamanship and its training for emergencies on water and on land.

A Sea Scout Patrol may be organized by a group of Senior Scouts and leaders within a Troop. The Sea Scout Handbook contains full information as to how to start and advance.



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A Sea Scout Patrol may be organized by a group of Senior Scouts and leaders within a Troop. The Sea Scout Handbook contains full information as to how to start and advance.

4. Rover Scouting

For Senior Scouts, Explorers or Sea Scouts 17 years of age or over—the Rover Scout Plan has been developed. The young man may become a Rover Apprentice at seventeen and a full-fledged Rover after eighteen. Rovers organize "Crews" made up of small groups of older fellows, generally connected with a Troop. The purposes of Rovering are associations which make possible mutual improvement and chances to render service as leaders in Troops and Packs and Ships, or elsewhere as needed. A central feature is the quest of each individual for a real job of service he may render somewhere in the community. Life work interests naturally color the meetings, social events, reading and expeditions.

In addition to these opportunities, many Local Scout Councils offer older Scouts chances to represent their Troop in

(a) A Press Club for Journalism experience.

(b) Knights of Dunamis, An Eagle Scout Service Society.

(c) Senior Degree Honor Society, for young leaders in Scouting.

(d) The Order of the Arrow, an honorary Camping Society.

If away at College, he may join with other Scouts there in the Alpha Phi Omega, the college Honorary Service Society of Scouts and former Scouts.

CHAPTER XXI

ONCE A SCOUT—ALWAYS A SCOUT

'Tis said that people who visit Florida "get sand in their shoes" and want to return. California urges a similar claim. Be that as it may, a genuine Scouting experience does something quite like that to the Scout. His interest in Scouting, its fun and associations, its ideals, its outdoor living, its service and citizenship seems to "get in his blood" and—"Once a Scout, always a Scout!"

In addition to the fine associations and opportunities outlined in the preceding Chapter on Senior Scouting, there are many others in this rich Scouting Program. Among these are the Veteran Scout membership, Leadership and Associate Scout or Alumni status.

How To Become A Veteran Scout

After five years of duly registered service in the Movement, a First Class Scout or Achievement Scout No. 2, or a Scouter, may, upon application, be registered as a Veteran Scout, provided he agrees to live up to his Scout obligations, to keep local Scout authorities in the community in which he lives informed as to his availablity for service to the community in case of any emergency, and further to take as active a part in the promotion of the cause of Scouting, as the circumstances and conditions in his case permit.

A special badge has been made available to all Scouts and Scouters who have completed five years of registered service and met the above requirements. Badges are also made available for each additional five years of registered service.

A Veteran Scout maintaining an active registered relationship as Scout or Scouter in any capacity pays the regular registration fees of his class. Veterans desiring recognition as ten year, fifteen, twenty or twenty-five year Veterans, etc., must maintain active registered relationship for the required number of years, paying their annual registration fees.

Certificate of Service—No Scout should be permitted just to "drop out" of Scouting. Every effort should be made to hold him as long as possible as an active member of the Troop, and, when this is no longer possible, as an associate member.

When the time comes, however, that a Scout must sever his connection with his Troop, he should, if his record has been creditable, and his reasons for leaving the Troop satisfactory, be given a Certificate of Service, or Honorable Discharge.

How To Become A Scoutmaster

The job of the Scoutmaster ranks at the top of civic service in these United States.

To give leadership, companionship, example, friendship and quality to a group of earnest youth is a real privilege and an equal responsibility.

The Scoutmaster is the most important cog in the great Scout Movement—he, indeed, is the mainspring on which the Movement depends.

Every real Scout looks forward some day to being, himself, the leader of a Scout Troop.

The steps of experience are clear cut:

1. Assistant Patrol Leader.
2. Patrol Leader.
3. Senior Patrol Leader.
4. Junior Assistant Scoutmaster.
5. Assistant Scoutmaster.
6. Scoutmaster.

While one may become a Scoutmaster *without* passing through these other offices—yet a Scout in the Troop *looks ahead,* and is "prepared" and when the chance offers to help the Scoutmaster—he helps him put away equipment, he helps him get the "bunch" together, he helps him train new recruits, he quietly helps him maintain good spirit, he also asks the Scoutmaster how he can help more! This is leadership training and service.

Associate Scouts

Active members of a Troop of Boy Scouts ordinarily hold regular weekly meetings. This is the condition of membership which is insisted upon wherever possible. However, when in the judgment of the Scoutmaster and the Troop Committee it is impossible for a boy to maintain active membership in any Troop, arrangements may be made according to the facts in each case to enroll the boy as an Associate Member of the Troop upon the following conditions:

1. The Associate Scout obligates himself to observe the Scout Oath and Law and do his "Daily Good Turn" in the same way as an active member of the Troop.

2. He obligates himself to attend during the year such Troop meetings as are agreed upon at the time he is enrolled as an Associate Scout. In no case can this be less than one meeting a year, and it may be one a month or every meeting during the vacation period.

3. He agrees to do all in his power to advance himself in Scouting activities, according to the circumstances in his case. In case of removal to another community, arrangements may be made whereby an Associate Scout may have the cooperation of local Scout authorities in passing Second Class, First Class and Merit Badge Requirements.

4. He agrees to hold himself as a Scout in readiness in case of any disaster or calamity requiring the services of his Troop, and in case of removal to another community to make known his presence and place of residence to the Scout authorities so that he may be available there for services in any emergency.

5. An Associate Scout pays his registration fees in the same manner as an active member of the Troop.

Scout Alumni

As evidence of "Once a Scout always a Scout" some two-thirds of all adult Troop Leaders have been Scouts themselves. They came up through the Movement.

Thousands go off to college and there may join Alpha Phi Omega (see Chapter XX), may help as local leaders. Incidentally, the percentages of Scouts among college men are significant and exceed 50%.

Then as a fellow gets his life work and starts his own home, he is pretty busy but whether or not he finds time to serve as a leader, at least he can maintain a contact with his own former Troop as one of its Alumni citizens. If living in another town, the former Scout is urged to introduce himself to the local Scout Executive and establish an Alumni relation as his time permits.

He probably will never be too busy to counsel with some Scout who wants advice.

In times of emergency, such a relationship may help save many lives, perhaps some of those in his own home. "Once a Scout—always a Scout."

ADDITIONAL SCOUTCRAFT

PART VI

CHAPTER XXII

WOODCRAFT

In this chapter have been gathered valuable outdoor hints and woodslore which, while not a part of the requirements for advancing in Scout rank, are most valuable for every woodsman to know. These include brief sections on

1. Weather.
2. Plants.
3. Butterflies and other Insects.
4. Fishes.
5. Conservation of Wild Life and Forests.
6. Reptiles.

Read these and then, at the nearest library, see what they have on these same subjects.

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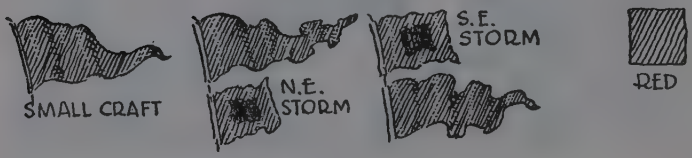
(1) WEATHER

U. S. Department of Agriculture, Weather Bureau

SMALL CRAFT, STORM, AND HURRICANE WARNINGS

Day Signals



U. S. Department of Agriculture, Weather Bureau

EXPLANATION OF WEATHER FLAGS

The temperature flag placed above another signal means that signal and rising temperature, or warmer —placed below it means falling temperature, or colder.

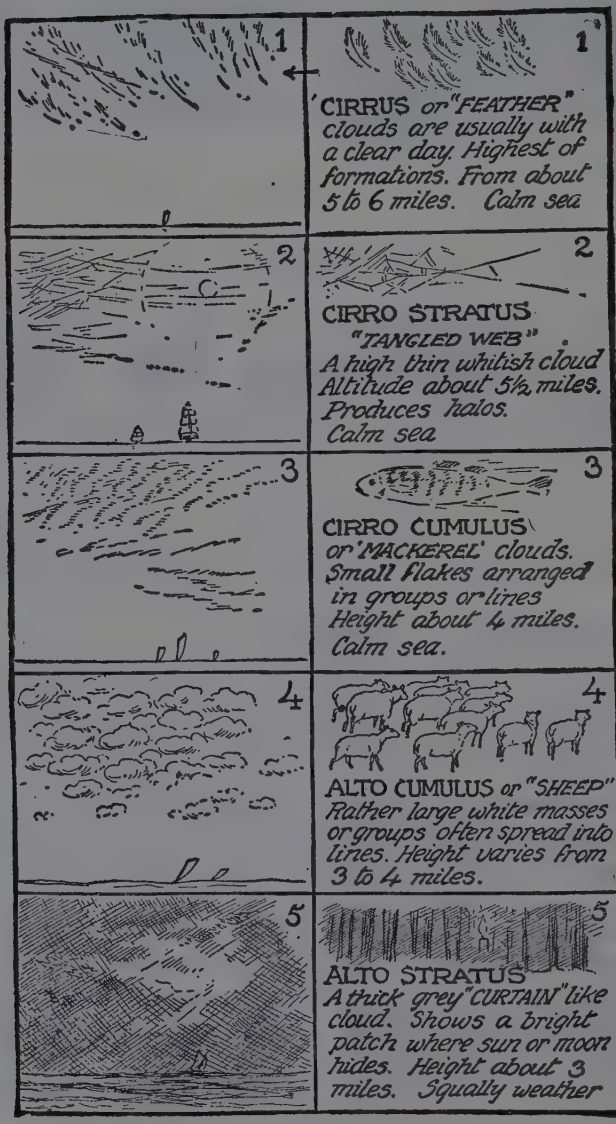
Weather Wisdom (Clouds)

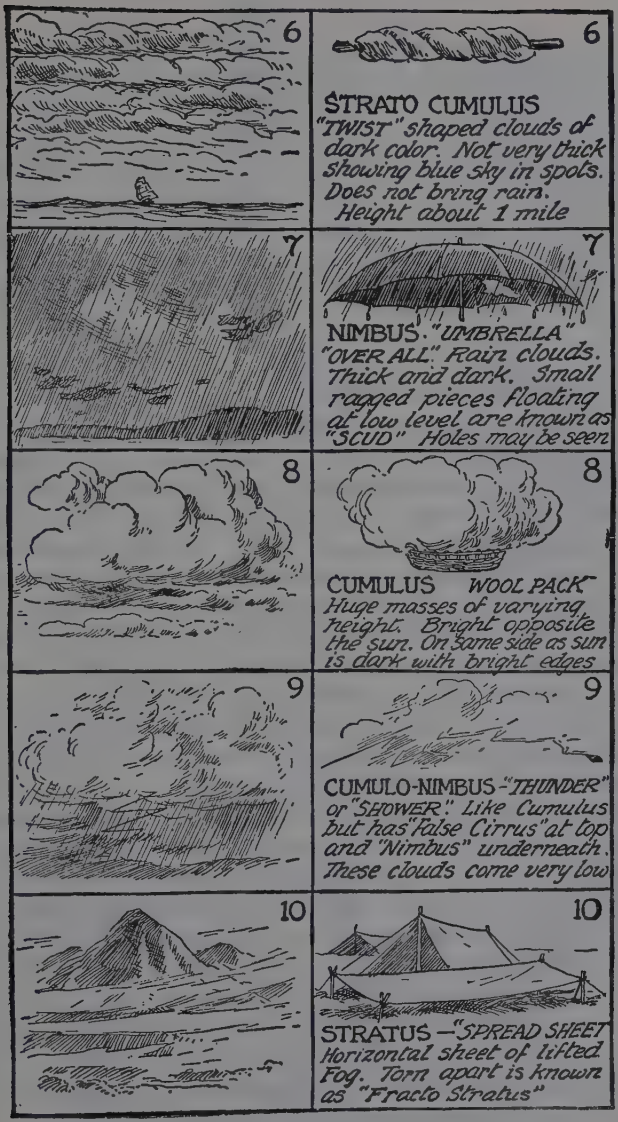
The alto-cumulus cloud (4) is usually a fair weather cloud though in the winter snow flurries may fall from it at times.

The strato-cumulus (6) is frequently seen in the fall months, and while accompanied by strong winds, its threat of snow or rain rarely produces either.

The cumulus cloud (8) is the typical summer sky cloud, but when the sun has caused enough moisture to evaporate from the earth below, these clouds get so full of moisture that rain or snow follows,—in other words cloud (8) passes into form (9).

—By Horton and Rigney, in "Scouting."


1
1
CIRRUS or "FEATHER" clouds are usually with a clear day. Highest of formations. From about 5 to 6 miles. Calm sea
2
2
CIRRO STRATUS "TANGLED WEB" A high thin whitish cloud Altitude about 5½ miles. Produces halos. Calm sea
3
3
CIRRO CUMULUS or 'MACKEREL' clouds. Small flakes arranged in groups or lines Height about 4 miles. Calm sea.
4
4
ALTO CUMULUS or "SHEEP" Rather large white masses or groups often spread into lines. Height varies from 3 to 4 miles.
5
5
ALTO STRATUS A thick grey "CURTAIN" like cloud. Shows a bright patch where sun or moon hides. Height about 3 miles. Squally weather


6
6
STRATO CUMULUS
"TWIST" shaped clouds of dark color. Not very thick showing blue sky in spots. Does not bring rain. Height about 1 mile
7
7
NIMBUS. "UMBRELLA" "OVER ALL". Rain clouds. Thick and dark. Small ragged pieces floating at low level are known as "SCUD" Holes may be seen
8
8
CUMULUS WOOL PACK Huge masses of varying height. Bright opposite the sun. On same side as sun is dark with bright edges
9
9
CUMULO-NIMBUS "THUNDER" or "SHOWER". Like Cumulus but has "False Cirrus" at top and "Nimbus" underneath. These clouds come very low
10
10
STRATUS — "SPREAD SHEET Horizontal sheet of lifted Fog. Torn apart is known as "Fracto Stratus"

(2) PLANTS

By GEORGE T. HASTINGS
Head Science Dept. Theodore Roosevelt High School, New York, N. Y.

It would be hard to overestimate the importance to Scouts of a knowledge of plants. Ranging in size from microscopic forms to giant trees—from the smallest living things to the largest,—in life span they include both those whose life is measured in hours as well as the oldest living things in the world, trees thousands of years old.

Make Human Life Possible

Plants are the food makers,—changing rocks into food for animals. The cells of green leaves and stems carry on the most important chemical process in the world,—that which makes possible human life. With the energy absorbed by the green coloring matter of the leaf (chlorophyll) from the sunlight, carbon dioxide and water are combined to form sugar and starch. This is the source of all our food. The delicate hairs on young roots absorb water from the soil, sending it up through the conducting vessels and fibres of the stems to the leaves. The leaves through their thousands of tiny mouths (stomata) take in carbon dioxide. In the green cells the carbon dioxide is broken down and the carbon unites with the hydrogen and oxygen of water to form starch. As an incident in the process plants give off as much oxygen as they take in carbon dioxide and become the great purifiers of the air. Plants furnish fibers for clothing, wood for building, medicine, oils, gums, resins, rubber and other useful products. The materials for pioneering and woodcraft, for camps and fires, food materials such as berries, nuts, edible roots, greens and mushrooms, come from plants. But plants are more than food and materials—they are wondrous friends—to meet and know.

SKUNK CABBAGE

JACK-IN-THE-PULPIT

MARSH MARIGOLD

WOOD ANEMONE

RUE ANEMONE

HEPATICA

WILD COLUMBINE

SPRING BEAUTY

ADDERS TONGUE

MANDRAKE

BLOODROOT

DUTCHMAN'S BREECHES

EARLY SPRING FLOWERS

Courtesy of The Slingerland-Comstock Co. Printed in U.S.A.

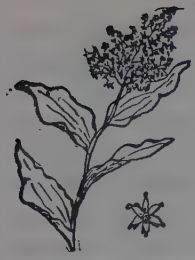
Poisonous Plants

Some plants however are poisonous. Some are poisonous to eat, as most all mushrooms are. *The U. S. Department of Agriculture advises all Scouts to leave mushrooms alone.* The common plants poisonous to touch are the poison ivy, poison oak,* and poison sumach. The first is a vine of wide distribution, sometimes spread over the ground, sometimes growing like a bush, sometimes climbing over fences and rocks and up the trunks of trees. It is easily recognized by the three-parted leaf, the middle leaflet being stalked. Sometimes, but not always, the leaflets are toothed on the sides. The poison sumach grows only in swamps. Its grayish twigs, smooth red leaf stems, entire edged leaflets and scattered white fruits distinguish it clearly from the non-poisonous sumachs. In both, the poison is a volatile oil that produces no effect on the majority of people but causes painful inflammation of the skin with numerous small blisters on some. After touching either of these plants washing with strong soap suds or alcohol will remove the poison from the skin. This precaution should be taken even if one thinks he is immune. *See First Aid—First Class Req. 6.

The Kingdom Of Plants

Plants are divided into four great groups: (1) *The Thallus Plants,* lacking true roots, stem, leaves, flowers and fruits; (2) *the Moss Plants* with stems and leaves of a very simple form but without flowers or seeds; (3) *the Fern Plants* also without seeds but with the stems and leaves more complicated; and (4) *the Seed Bearing Plants,* the highest group.

I. The Thallus Plants —include, 1*st, the algae,*—seaweeds, pond scums, and other forms, among them the green stain that is so often found on the trunks of trees, chiefly on the north side. 2*nd, the bacteria,* man's



WILD SPIKENARD

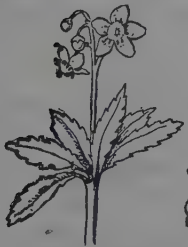
CANADA MAYFLOWER

SOLOMON'S SEAL

CLINTONIA

WINTERGREEN

SPOTTED WINTERGREEN.



PRINCE'S PINE

SHIN-LEAF

ONE-FLOWERED PYROLA.

TWINFLOWER

PARTRIDGEBERRY

FOUR-LEAVED LOOSESTRIFE

WOODLAND FLOWERS OF LATE SPRING AND SUMMER

Courtesy of The Slingerland-Comstock Co. Printed in U.S.A.

invisible friends and foes. Our First Aid and camp sanitation is concerned largely with destroying harmful bacteria. *3rd, the fungi,*—moulds, mildews, mushrooms, puffballs and many kinds that cause diseases of plants. One of these has killed most of the chestnut trees of the East and the remainder seem doomed. The white pines are now threatened by another fungus that can be more easily controlled as it can not spread without the help of currant or gooseberry bushes. Most, if not all, of our cultivated plants have fungus enemies that must be fought if man is to survive on the earth. *4th, the lichens,*—curious grayish, yellow, brown or black plants living on wood, stone or soil. These are in reality double plants, algae and fungi living in partnership. They are the pioneers of the plant world, living on bare rocks and slowly forming soil in which other plants may find a foothold. A few are edible, as the reindeer moss of the north which is important to the musk ox and reindeer and in case of emergency may be used by man.

II. The Mosses—include the liverworts, some moss-like, some small flat plates or branching ribbons of green on damp soil or rocks. The true mosses are small leafy-stemmed plants which produce spores in capsules. One of the commonest is the pigeon-wheat moss. This has slender pointed leaves growing out from erect stems so that as one looks down on it there is a suggestion of tiny stars. From the top of the stem there may grow a brown stalk perhaps two inches high on which is the oval capsule which when still young is covered by a hairy cap. The largest mosses are the sphagnums or peat mosses, the most characteristic plant of bogs.

III. The Ferns—and their allies are also spore-bearing plants. The true ferns have on the backs of

BULL THISTLE

BURDOCK

CANADA THISTLE

TANSY

TEASEL

CHICORY

PURPLE CONE FLOWER

BLACK-EYED SUSAN

BLUE VERVAIN

BONESET

GOLDENROD

ASTER

SUMMER FLOWERS OF FIELDS AND ROADSIDES

Courtesy of The Slingerland-Comstock Co. Printed in U.S.A.

their usually dissected leaves small fruit dots, marginal, oblong or round. These are made of tiny spore cases, sometimes several hundred in each dot. The cases hold the spores and throw them out when ripe. Under suitable conditions these spores grow to make the next stage in the fern's life history. This is a heart-shaped, flat green structure rarely over a quarter of an inch across, on the under side of which grow the sperm and egg cases. If a sperm fertilizes an egg another fern plant like the original develops. With the ferns are grouped the club mosses, horsetails and quillworts, plants which have little resemblance to ferns but do have spore cases and similar life histories. Ferns were more important in past ages than now. Millions of years ago, when our coal was forming, ferns and their allies made the most important part of the earth's vegetation.

IV. Seed Producers—are the highest group of plants. It includes the very important group of cone bearing plants—pine, spruce, hemlock, cypress, redwood, etc—which have nothing that fits the popular idea of a flower. The flowering plants are those that dominate the landscape in most parts of the country. With over 150,000 species in the world, growing in all places from water to deserts, from sea level to the tops of high mountains, they naturally assume a great variety of form. Those adapted to live in water are most widely distributed,—cat-tails, water lilies, pond weeds and duckweeds grow in all parts of the country and should be known to everybody. The marsh plants are largely grasses and sedges, the former with round stems, the latter often with triangular ones. Plants of the roadsides and cultivated fields vary in different parts of the country but everywhere a large proportion of them are foreign, often troublesome weeds. Cactus plants from our Southwest, of interest because of their adaptions to life in the desert, have become

TURTLE-HEAD

WATER PARSNIP

MONKEY FLOWER

JEWEL-WEED

BLUE IRIS

ROSE MALLOW

CAT-TAIL

WATER ARUM

GOLDEN CLUB

PICKEREL-WEED

WATER LILY

YELLOW POND LILY

MARSH AND WATER FLOWERS

Courtesy of The Slingerland-Comstock Co. Printed in U.S.A.

the worst weeds of Australia. Blackberries have in a similar way become a pest in New Zealand. So ragweed, pigweed, dock, burdock, thistles and a hundred others have come to our country from abroad and added to the work of our farmers and to the cost of our food.

Flowers

Flowers of all kinds, sizes, shapes and colors are all made of four kinds of modified leaves. These are the sepals on the outside, usually green and serving to protect the bud; the petals, usually colored and serving for the attraction of insects; the stamens slender filaments with knob-like, yellow anthers that form the pollen; and the pistils, holding the ovules that develop the seeds. Some flowers are complete with all these parts, some lack one or more. With most plants better seeds are formed if the pollen and ovule are from two different plants of the same kind,—pollen from a different kind of plant has no more effect on the pistil than so much dust. Most of the curious shapes, the bright colors, the odors of flowers are adaptions to secure insect visitors and to bring about cross pollination. It is worth while to watch insects as they visit flowers, to see what flowers are visited by each kind of insect, how they land on or enter the flower, how long they stay, and to find the beautiful adaptions that fit both insect and flower for the work.

Families

It is by the flowers that plants are classified. A little study will enable any one to learn the characters of a few of the largest families of plants and to be able to have at least that much acquaintance with the majority of plants seen wherever he may be. For example—the largest family of plants, containing about one-tenth of all flowering plants, is the thistle family. Here

ARBUTUS

PINK LADY'S SLIPPER

SHOWY ORCHIS

GRASS PINK

INDIAN PINK

WOOD LILY

BIRDS FOOT VIOLET

PINK AZALEA

MOUNTAIN LAUREL

FLOWERING DOGWOOD

FRINGED GENTIAN

MEADOW BEAUTY

CARDINAL FLOWER

WHITE TRILLIUM

FLOWERS NEEDING PROTECTION

Courtesy of The Slingerland-Comstock Co. Printed in U.S.A.

all of the flowers are very small but many are grouped in a head with a set of small, usually green leaves around the head resembling a calyx,—the whole head seeming to be a single flower. To this family belong the asters, goldenrod, daisy and thousands of others. One can easily secure further knowledge of the flowers or other plants from such books as are listed below.

For the Botany of the Northwestern United States use:

"New Manual of Botany," 7th ed. Asa Gray.

"Illustrated Flora of the United States and Canada." N. L. Britton and Hon. Addison Brown.

For the botany of the Southern United States use:

"Manual of the Southeastern Flora." J. K. Small.

"Southern Wild Flowers and Trees." Alice Lounsberry.

For the botany of the Rocky Mountain region use:

"New Manual of Botany of the Central Rocky Mountains." John M. Coulter; Revised by Aven Nelson.

"Rocky Mountain Wild Flower Studies." Burton O. Longyear.

For general information regarding the shrubbery plants of the United States use:

"Ornamental Shrubs of the United States." Austin C. Apgar.

"Our Northern Shrubs." Harriet Louise Keeler.

For the wild flowers outside of those already mentioned use:

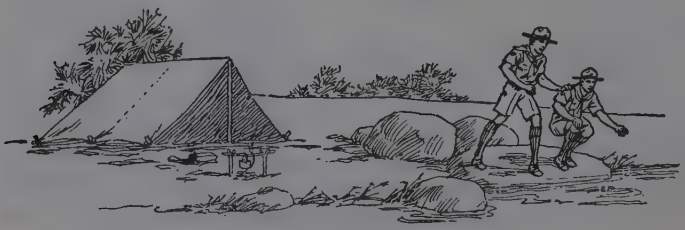
"Our Garden Flowers." Harriet Louise Keeler.

"How to Know the Wild Flowers," Frances Theodora Parsons.

"Field Book of American Wild Flowers." F. Schuyler Mathews.

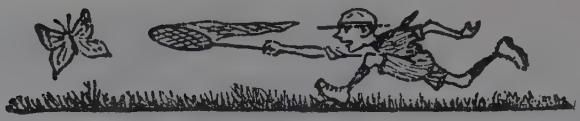
"Flora of the Plains and Prairies." P. A. Rydberg

"Manual of the Flowering Plants of California." W. L. Jepson



STATE FLOWERS

Alabama ..... Goldenrod
Arizona.....Sahuaro Cactus
Arkansas.....Apple Blossom
California.....Golden Poppy
Colorado ..... Columbine
Connecticut
Mountain Laurel
Delaware.....Peach Blossom
D. C...American Beauty Rose
Florida.....Orange Blossom
Georgia.....Cherokee Rose
Idaho ..... Syringa
Illinois.....Wood Violet
Indiana ..... Zinnia
Iowa.....Wild Rose
Kansas ..... Sunflower
Kentucky.....Trumpet Vine
Louisiana ..... Magnolia
Maine.....White Pine Cone
Maryland....Blackeyed Susan
Massachusetts .... Mayflower
Michigan.....Apple Blossom
Minnesota ..... Cypripedium
(Moccasin Flower)
Mississippi ..... Magnolia
Missouri ..... Hawthorn
Montana ..... Bitterroot
Nebraska ..... Goldenrod
Nevada.....Sage Brush
New Hampshire
Purple Lilac
New Jersey.....Violet
New Mexico.....Cactus
New York.....Rose
North Carolina.....Goldenrod
North Dakota
Wild Prairie Rose
Ohio.....Scarlet Carnation
Oklahoma ..... Mistletoe
Oregon.....Oregon Grape
Pennsylvania
Mountain Laurel
Rhode Island.....Violet
South Carolina
Yellow Jessamine
South Dakota..Pasque Flower
Tennessee ..... Iris
Texas ..... Bluebonnet
Utah ..... Sego Lily
Vermont.....Red Clover
Virginia..Flowering Dogwood
Washington ....Rhododendron
West Virginia..Rhododendron
Wisconsin ..... Violet
Wyoming..Indian Paintbrush



(3) BUTTERFLIES AND OTHER INSECTS

DR. L. O. HOWARD
Former Chief United States Bureau of Entomology

There is an advantage in the study of insects over most other branches of nature, excepting, perhaps, plants in that there is plenty of material. You may have to tramp miles to see a certain bird or wild animal, but if you will sit down on the first patch of grass you are sure to see something going on in the insect world.

Butterflies

Nearly all insects go through several different stages. The young bird is very much like its parent, so is the young squirrel, or young snake, or young fish, or young snail; but with most of the insects, the young is very different from its parents. All butterflies and moths lay eggs, and these hatch into caterpillars, which when full grown transform to what are called pupae or chrysalids—nearly motionless objects with all of the parts soldered together under an enveloping sheath. With some of the moths, the pupae are surrounded by silk cocoons spun by the caterpillars just before finally transforming to pupae. With all butterflies the chrysalids are naked, except with one species which occurs in

Central America in which there is a common silk cocoon. With the moths, the larger part spin cocoons, but some of them, like the owlet moths whose larvae are the cut-worms, have naked pupae, usually under the surface of the ground. It is not difficult to study the transformations of the butterflies and moths, and it is always very interesting to feed a caterpillar until it transforms, in order to see what kind of a butterfly or moth comes out of the chrysalis.

Take the monarch butterfly, for example. This is a large, reddish-brown butterfly, a strong flier, which is seen often flying about in the spring and again in the late summer and autumn. This is one of the most remarkable butterflies in America. It is found all over the United States. It is one of the strongest fliers that we know. It passes the winter in the Southern states as an adult butterfly, probably hidden away in cracks under the bark of trees or elsewhere. When spring comes the butterflies come out and begin to fly toward the north. Wherever they find the milkweed plant they stop and lay some eggs on the leaves. The caterpillars issue from the eggs, feed on the milkweed, transform to chrysalids; then the butterflies issue and continue the northward flight, stopping to lay eggs farther north on other milkweeds.

By the end of June or July some of these Southern butterflies have found their way north into Canada and begin the return flight southward. Along in early August they will be seen at the summer resorts in the Catskill Mountains, and by the end of October they will have traveled far down into the Southern states, where they pass the winter.

The caterpillar of the monarch or milkweed butterfly is a very striking creature. It is nearly two inches long when full grown. Its head is yellow striped with black; its body is white with narrow black and yellow crossstripes on each segment. Its chrysalis is pale pea-green in color with golden spots.

Monarch Butterfly

It will be easy to watch them and to see them transform. The same thing may be done with any one of the six hundred and fifty-two different kinds of butterflies found in the United States.

Moths

When it comes to moths, there is a much greater variety.

Instead of six hundred and fifty-two, there are fifty-nine hundred and seventy in Doctor Dyar's big catalogue. Perhaps the most interesting of these caterpillars are the big native silkworms, like those of the cecropia moth, the luna moth, the polyphe-

Cicada
(wrongly called Locust
in the U.S.)

Potato Beetle

mus moth, or the promethia moth. These caterpillars are very large and are to be found feeding upon the leaves of different trees, and all spin strong silken cocoons. The polyphemus moth is found over a greater part of the United States, and its caterpillar feeds upon a great variety of trees and shrubs such as oak, butternut, hickory, basswood, elm, maple, birch, chestnut, sycamore, and many others. The caterpillar is light green and has raised lines of silvery white on the side. It grows to a very large size and spins a dense hard cocoon usually attached to leaves. There are two generations in the Southern states, and one in the Northern states. The moth which comes out of the cocoon has a wing spread of fully five inches. It is reddish-gray or somewhat buff in color with darker bands near the edge of the wings, which themselves are pinkish on the outside, and with a large clear spot near the center of the fore wing and a regular eyespot (clear in part and blue in the rest) in the center of the hind wing.

Walking Stick

Giant Water-Bug

Sphinx Moth

One wishing to know about butterfiies and moths should consult "How to Know the Butterfiies," by Prof. J. H. Comstock of Cornell University. (D. Appleton & Co., of New York.) "The Butterfly Book" and "The Moth Book," by Dr. W. J. Holland of Pittsburgh. (Doubleday, Page & Co., of New York.)

Other Insects

Ant

There are many more different kinds of insects than there are of flowering plants, and if we were to add together all of the different kinds of birds, mammals, reptiles, fishes, crabs, mollusks, and all of the lower forms of animal life, they would not all together amount to as many different kinds as there are insects. This makes the classification of insects quite complicated. There are eighteen or nineteen main orders, and each one is subdivided almost indefinitely. There is not one of these that is not full of interest. The habits of ants, for example, living in communities by themselves, afford a tremendous opportunity for interesting observation.

Mayfly

Male

Female

Tree Crickets

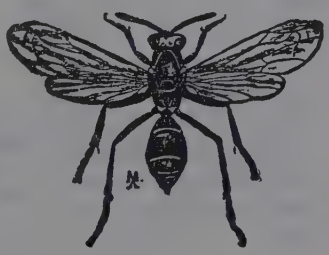
A good book about them has been recently written by Dr. W. M. Wheeler of Harvard, entitled, "Ants, Their Structure, Development, and Behavior," published by the Columbia University Press, New York.

Many insects live in the water, and to follow their life histories in small home-made aquaria is one of the most interesting hobbies one could have, and there is a lot to be learned about these insects. Go to any stagnant pool and you will find it swarming with animal life: larvae or "wigglers" of mosquitoes, and a number of other acquatic insects will be found feeding upon these wigglers. Water bugs of different kinds will be found and the life histories of most of these were almost unknown until quite recently.

Beetles And Wasps

The order *Coleoptera,* comprising what we know as beetles, has thousands of species, each one with its own distinctive mode of life; some of them feeding upon other insects, others boring into wood, others feeding upon flowers, others upon leaves, and so on in endless variety.

The wasps also will bear study. Here, too, there is a great variety, some of them building the paper nests known to every one; others burrowing into the surface of the ground and storing up in the burrows grasshoppers and other insects for food for their young which are grub-like in form, some burrowing into the twigs of bushes, and others making mud nests attached to the trunks of trees or to the clapboards of buildings.



Paper Wasp

Leaf Beetle

This is just a hint at the endless variety of habits of insects. In the Merit Badge Series published by the Boy Scouts of America, is included "Insect Life," at $1.50, a Manual of over 200 pages. Besides giving information on the Insect Life Merit Badge Requirements, it tells how to make a collection, how to catch and kill insects, arrange them and rear them.

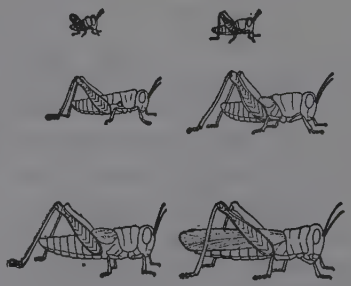
Some Insect Facts

"Insects differ from other animals in that they have six legs. Spiders and centipedes have eight or more legs and therefore are not insects. Insects usually have wings and do not grow after they have attained them. Little bees never grow into big bees.

Some insects grow by persistent eating—filling themselves up until they experience relief as their skin splits across the neck and down the back. Out of this opening the insect creeps, leaving behind the old shell.

The grasshopper repeats that process six times at intervals of a week or so. Its last stage finds the 'coat changing' fellow with his wings.

Insects breathe through side body openings called spiracles. Their blood completely fills the body cavity and is kept in motion by a tube like pulsating heart open at both ends. Most insects seem to smell and some hear by means of their antennae. The tasting organs (palps) are just inside the mandibles or jaws. Some, like the butterfly, have sucking mouth parts.



Grasshopper

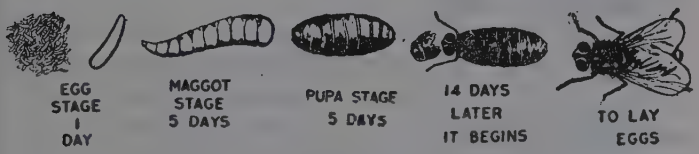
—By A. R. Janson, State Museum. Gainesville, Florida

Mosquitoes And Flies

Horsefly

About eight days after a "good meal"! the mosquito (culex—the common, non-disease bearer) lays some 300 eggs in little rafts on the surface of, preferably still, shallow water. These hatch in one to seven days, sending forth a horde of larvae or "wrigglers." These feed from six to twenty-one days and then pass into a pupa or resting stage of one to six days from which an adult winged mosquito emerges ready for business! The life cycle then varies from 8 to 34 days. In other words two mosquitos under most favorable conditions could produce 27,000,000 new adult mosquitos in 24 days! Relief—Drain standing water or oil the surface. * * *

The Common housefly about four days after mating seeks out a manure pile or decaying matter and lays four crops of about 120 eggs each. In 8 to 24 hours these hatch into tiny white maggots which shed their skins twice in a 5 day growing period after which they rest for 5 days as a white to dark bean shaped object from which a new fly emerges ready for life. One pair in 63 days can produce 53 billion others! Swat the fly! * * *



LIFE CYCLE OF A FLY

(4) FISHES

By LEWIS RADCLIFFE
Former Deputy Commissioner, U. S. Bureau of Fisheries

A fish is a back-boned animal adapted to life in the water. Specialized organs, the gills, extract the life giving oxygen from the water. The water passes in through the mouth, bathing the gills, and then out behind the gill covers. These are usually located under the bony cheeks. Fins replace limbs and serve to hold the body of the fish in balance or enable it to move slowly or rapidly through the water. Fish have no eyelids and therefore cannot close their eyes when asleep. The crystalline lens is nearly spherical to enable the fish to see clearly in water. Fish are therefore near-sighted and cannot see objects at a distance or out of the water. The nostrils are small openings in front of the eyes leading into a little cup. They are not used in breathing but to detect the presence of things in the water. Over the fish's stomach is a closed sac, filled with air—called the air or swim bladder, which has become modified from a lung to an organ of buoyancy, helping the fish to hold its position in the water. A few fishes, like the gar fish and the bowfin still have lung-like air bladders and rise to the surface of the water to gulp air.

Perca flavescens
Yellow perch

Pomolobus aestivalis
The alewife or river herring

Micropterus salmoides
Large-mouth black bass

Notropis hudsonius
Minnow or shiner

Acipenser oxyrhynchus
The Atlantic sturgeon

Form

Esox lucius
Common pike pickerel

Oncorhynchus tschawytscha
Chinook salmon

Coregonus clupeiformis
Common whitefish

Salvelinus fontinalis
Brook trout: speckled trout

Fish are of almost innumerable shapes. Mackerel and pickerel are nearly cylindrical, tapering at either end. Such fishes are usually capable of great speed and offer but little resistance to the water. Makers of aircraft have obtained valuable information from the study of fishes and marine mammals. Most fishes are compressed at the sides. Flounders, skates and rays are depressed, adapted to a life at or near the bottom. Eels and some other fishes have long, slender, snake-like bodies. The ungainly ocean sunfish is nearly all head. Whenever you catch a fish study its form and seek the explanation as to where it lives, whether it is a surface swimmer, a bottom dweller; whether it is built for speed or leads a sluggish life.

Scales

Most fishes have the body covered with scales like the shingles on a roof. Some, such as the catfishes, have naked bodies. In many sharks the skin is covered with shagreen, composed of a multitude of horny denticles. At one time the shagreen was used for polishing wood, ivory, etc. On the body of the sturgeons there are five rows of bony plates. The skin of the sea-horse is ossified into a hard case. Note the covering of the skin.

Ictalurus punctatuus
The speckled catfish

Scales have rings of growth and winter rings. In fishes like salmon we can determine age from scales as one does by study of the cross-section of a tree. Scales may be cleaned and mounted dry on glass slides for study under the microscope. This is a most interesting subject.

Color

The upper surface of the fish is darkhued. This makes it difficult for man, fish hawks, or other enemies to see the fish when looking down into the water. Most fishes, especially the surface swimmers, have the under surface white or light colored to conceal the fish from its enemies below where things at the surface look white. Many fishes, especially those living in the tropical gardens of the sea, are brilliantly hued. Perhaps the many hiding places among corals and sponges make a protective coloration less necessary. Note that the upper parts of many fishes living at or near the bottom closely resemble the color of the bottom or is of a pattern which helps to conceal the fish. Boys who have gigged for flounders know how difficult it is to discover one of these fishes bedded in the sandy bottom.

Locomotion

Study the live fish in his home or in an aquarium. Note that the tail fin is largely depended upon to drive the fish through the water. The other fins are used chiefly to keep the fish in equilibrium or to direct his motion up, down, or to one side through the water. The pectoral fins, one on either side behind the head correspond to our arms, and the pair underneath (ventral fins) to our legs.

Breeding Habits

The study of the breeding habits of fishes is a most fascinating subject. Such fishes as the black basses build a nest on which are laid the eggs. One of the parents stands over the nest and with a gentle fanning motion of the fins keeps the eggs free from sediment, the other parent stands guard to keep intruders away. Even the young fish are guarded for a time. The Pacific salmon, after growing to maturity in the sea, return to the stream of birth, deposit their eggs and die. On the other hand, the fresh-water eel leaves the sea at an early age, for a life in our lakes and streams, going down into the sea at maturity to lay its eggs and die. Many of our fishes are stay-at-homes. Boy Scouts will find it a most interesting subject to study the nesting habits and the various important incidents in the life of a fish.

As there are about 3,300 species of fishes known in the waters of North America, space in this brief article will not permit of description or keys even of the more important food fishes. Furthermore, not more than one-tenth of this number will be found in any one locality, usually much fewer. Boy Scouts interested in identifying the fish they catch, should consult some good book such as American Food and Game Fishes by David Starr Jordan and Barton W. Evermann, published by Doubleday, Page & Co., Garden City, N. Y.

Angling

Angling is one of the most pleasurable pastimes, a builder of health and character, available to old and young, rich and poor. The Honorable Herbert Hoover once said:

Catostomus commersonii
Common sucker: white sucker

"I am for fishing for fun as a contribution to construc-

tive joy because it gives an excuse and an impulse to take to the woods and to the water. Moreover, fishing has democratic values because the same privilege of joy is open to the country boy as to the city lad. And equally to his properly brought up city or farmer dad.

"There is an equality of all men before fishes. The fish has never learned to discriminate much as to the price of tackle. He takes no account of class or manners and with it all, while there are high moments of excitement and periods of great thrill, the good fisherman must yield to contemplative moods, for often it is a long time between bites. These interregnums make for reserve and calm reflection. No one can catch fish in anger or in malice. A good fisherman must by nature be possessed of much faith and hope or he would not fish. He gains even in charity when he listens to other fishermen. All of which should create a high esteem for fish."

In angling, keep a record of the kinds of fish you catch with a particular bait; time of day, weather conditions, stage of tide and other factors and almost without knowing it you will acquire a fund of information about fishes that will surprise your fathers and big brothers.

The boy interested in angling can usually find a number of good books on the subject in his local library.

Maintaining Our Fisheries

Fisheries were of the greatest importance from the earliest periods of our history. Some of the early settlements would have perished but for this source of

human food. We have not given this great natural resource the protection it merits as a source of food, recreation and products used in the arts and industries. We continue to dump our sewage and harmful products from many industrial plants into lake, stream and enclosed coastal area until some of them are little more than open sewers, wholly uninhabitable to acquatic life. We are continually reclaming marsh, swamp, and bayou, the home of the little fishes and their food without regard to what purpose the area will best serve. We even clear out the water plants along the shores of lake or steam, the brush and snags as well. These afford protection to the little fishes and the source of much of their food and then we wonder why we don't have good fishing. Our drainage ditches, and dams add to the difficulties of keeping our streams stocked. Good roads and the more general use of the automobile have made it possible for millions of our people to go fishing and thus increased the drain on the supply.

Things The Boy Scouts Can Do

The Boy Scout can help to main the good fishing by:

1. Returning undersized or immature fish to the waters unharmed (the hands should be moistened in handling live fish and the fish handled with care to prevent loss of scales or bruising);
2. Leaving the spawning fish unmolested on their nests thus affording protection to the brood fish;
3. Retaining only as many as will be eaten;
4. Fostering artificial propagation of fishes by stocking our waters;
5. Obeying the fishing laws and encouraging others to do the same.

Fundulus diaphanus
Killfish: top minnow

The Bureau of Fisheries, Washington, D. C., will aid in identification of species.

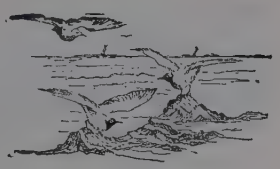
(5) THE CONSERVATION OF WILD LIFE AND FORESTS

DR. E. W. NELSON
Former Chief, Biological Survey, U. S. Dept. of Agriculture

With the growth of towns and the more intensive occupation of the fields and forests by man, both our wild animal and plant life which beautify the world have a more and more difficult existence.

The early settlers in the Eastern United States found the country covered everywhere with forests in which there was an abundance of wild life, including deer, elk and buffalo, the bears, wild turkeys and grouse, and many kinds of small game. The forest was regarded as an obstruction in the path of progress and was cut and burned as rapidly as possible to make way for cultivated crops. With the destruction of most of the forest and over-hunting much of the wild life disappeared, or has been forced back into the mountain areas. The havoc wrought has been largely due to a lack of appreciation of the recreational and the economic value of wild animal and plant life. Enlightened public sentiment is now, however, demanding that such natural resources be conserved and increased for the benefit of our succeeding generations.

The problem of maintaining an abundance of game is beset with difficulties, owing to the ever increasing army of hunters. Through the use of automobiles over new roads, remote wilderness sections are now easily and quickly penetrated, and the game is placed at a



new disadvantage. Hunting is one of the finest of sports, but requires strict regulation to the end that the game will not be decreased unduly. Some sections in which such game as deer, bears and wild turkeys had become extinct, have been restocked with the most gratifying results, and soon may be accomplished on a wider scale.

Organized Conservation

Federal laws now prohibit the killing of all birds migrating between Canada and the United States, except under regulations by the Secretary of Agriculture that in the main provide for the shooting of migratory game birds during such seasons and under such conditions as will afford them suitable protection. State laws for the protection of wild life are steadily being improved. The National Conference on Outdoor Recreation, the National Association of Audubon Societies, the Izaak Walton League of America, the American Game Protective Association, the Wild Flower Preservation Society, and many other organizations are banded together and in cooperation with the Federal and State Governments are making earnest efforts to conserve our wild life. Only by wise forethought and careful guardianship, may we hope to continue to enjoy the beauties of nature and the health-giving life in field and forest surrounded by the wild things that give them such an interest and charm.

Among the Boy Scouts we may expect to find that appreciation of the need of the guardianship of the animal and plant life of the out-of-doors as a part of that fine sense of responsibility that is included in Scout training. By exercising a restraining influence against unnecessary destruction of wild things and

preventing forest fires, Scouts engage in the most practical and useful kind of conservation work. In doing the daily "Good Turn" it will be admirably helpful if Scouts include something to promote the conservation of wild life and forests.

What A Scout May Do For Wild Life And Forests

He Should Maintain His Self-Respect — and become an example to others by strictly observing all laws and regulations for the protection of game, game birds and fishes, and refrain from the wanton destruction of harmless wild life in general. Violations of conservation laws that come to his attention should be reported to the proper officers.

He Should Use Scrupulous Care In Preventing Forest Fires—that not only destroy the timber but the wild life it feeds and shelters. Put out any running fires in timber or report them to the owner or proper public officer. Be careful with matches and leave no camp fires burning.

He Should Not Break Down Flowering Trees—or pick the flowers and plants that have become rare and are threatened with extinction, or wantonly destroy plants that are useful or harmless.

His General Attitude Toward Wild Animal Life And Plant Life—should be sympathetic and such as to influence others in their conservation. As one means of doing this, he should join or cooperate with organizations having for their object the protection of wild animal and plant life.

If suitably located and properly qualified, the Scout over 18 years old may contribute materially to our knowledge of the migration of birds by the banding

method. For details he may write to the Biological Survey, U. S. Department of Agriculture, Washington, D. C.

Hornaday Award For Distinguished Service To Wild Life

The New York Zoological Society, through its director, Dr. W. Reid Blair, continues the late Dr. William T. Hornaday's award to Scouts and Scouters for Distinguished Services to Wild Life. The requirements were approved by Dr. Hornaday shortly before his death and include definite suggestions for service projects.

The Gold Honor Badge for Services to Wild Life may be won by exceptional work along the line of wild life protection continuing throughout one year or more. Those who work for this Honor Badge are informed that in considering services that have been rendered, the actual results that have been accomplished count heavily.

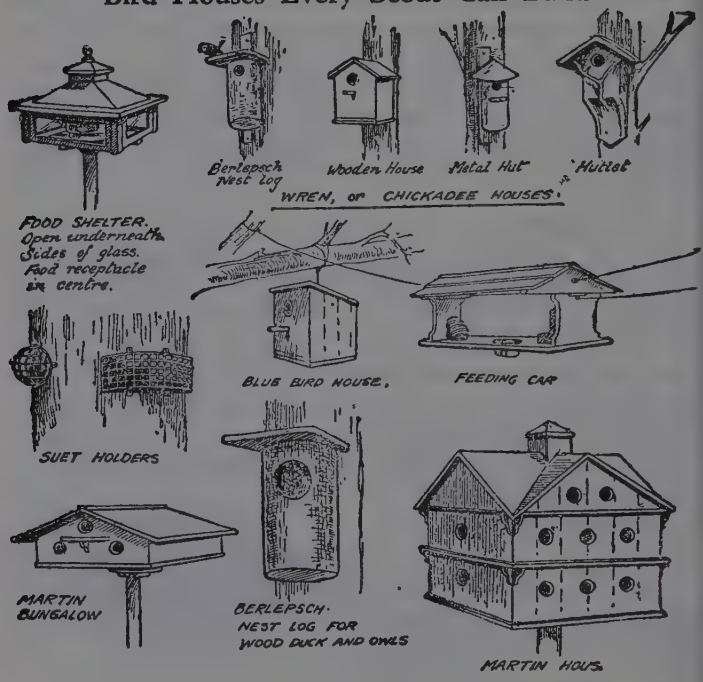
The exercise of good judgment is necessary in deciding what kind of service will be most valuable to wild life in each locality. There are many ways in which valuable service can be rendered to wild life, for example—Personally see farmers, property owners and sportsmen and ask them to build or allow adequate shelters for the protection of upland game, also ask the farmers to leave standing the first few rows of corn, wheat, alfalfa or timothy next to their woodland for the food and protection it affords all upland game.

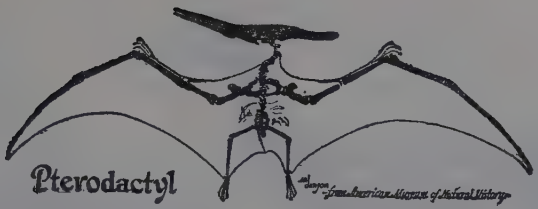
Ask feed dealers to cooperate by donating feed; vegetable, and

grocery stores to donate old greens, carrot tops, old lettuce, cabbage, dried or old apples or anything he might add or suggest that is no longer salable or fit for table use. Said feed to be collected and distributed and placed under shelters which the Scout or the farmer has built. (It must be remembered that birds do not have teeth. Here fish stores can contribute greatly by donating oyster shells, which can be crushed almost to a powder form and placed in small amounts in or near each feed station for the purpose of an aid to digestion. (A small pile of sand may also be left for birds to scratch in.)

Send to the Boy Scouts of America, 2 Park Avenue, New York, N. Y., for application blank and requirements.

Bird Houses Every Scout Can Build





Forerunner of Our Birds

(6) REPTILES

By DR. G. KINGSLEY NOBLE
Curator of Reptiles, American Museum of Natural History

Reptiles include crocodiles, turtles, lizards, and snakes. Reptiles may be distinguished from other backboned creatures by their dry scaly skin. A few of them, such as the soft-shell turtles and some gecko lizards, have lost the scales, but all others have them present.

Ancient Reptiles

Reptiles have an ancient and honorable history behind them. They date back, as fossils, almost to the Carboniferous time, that is, to the age when coal was formed from the detritus of trees and other vegetation. Dinosaurs and many other monsters of those days belonged to the reptile group. Then reptiles dominated the world.

Modern Reptiles

Modern reptiles are a mere remnant of those ancient forms. Three of the four groups living today have existed from nearly the earliest times. One group, the snakes, are not so ancient. In fact, snakes are merely legless lizards, which early specialized in wriggling and got along very well without legs.

Giant Reptiles of the Past

The Crocodilians

There are only two crocodilians in the United States: the crocodile and the alligator. The latter are still fairly abundant in the South. The crocodile is very rare and is found only in the southern tip of Florida and possibly in Texas. The crocodile has a long, rather narrow pointed head, which in the alligator is broader and rounded at the snout.

Turtles

The turtles are very numerous all over the United States. Sea turtles are unique in having flippers. Soft-shell turtles are species with a soft leathery skin over their shell. Turtles are really primitive reptiles which are walking inside of their ribs; that is, the ribs after being strengthened by additional bony plates have managed to slip outside of the shoulder and thigh girdles to form the bony box or shell.

In Eastern United States the common species include the musk and mud turtles, snapping turtles, the wood turtles, the box turtles, and the various pond turtles, the painted turtles with their bright red spots on the lower margin of the shell and the spotted turtle with its small yellow spots all over the top of the shell. In

the West are found box turtles, mud turtles, and a number of river species.

Lizards

The lizards in the United States are mostly terrestrial, except a few, such as the Florida "chameleon" which is found in trees. There are four principal families of lizards in the United States. By far the most abundant are the Iguanidae, which includes the "chameleon," the "horned toad," and the chuckwallas. The fence lizard, *Sceloporus,* is represented by many species. They have rough, pointed scales, blunt heads, and live more in trees than most of the following species. On the deserts of our Southwest there are many iguanid lizards. Perhaps the most abundant are the collared lizards, *Crotaphytus,* and the Gridiron-tailed lizard, *Callisaurus.* The latter are to be distinguished by the bright bars on their tails. The swift-running lizards with pointed snouts, abundant in the Southwest, belong to a different family, the Teiidae. They are called the Swifts. The third family of both Eastern and Western United States is the Scincidae. They are smooth scaled lizards, often very shiny in appearance. One of the most abundant lizards in Eastern United States is the Blue Tailed Skink. This species has a bright blue tail when it is young, but as it grows older its tail grows brown and its head redder. The fourth family which we shall mention here includes the Gila Monsters. The American Gila Monster is bright salmon and black. It lives only in the deserts of the Southwest and cannot be confused with any other species. It is the only

Painted Turtle

Horned Toad

poisonous lizard in the world. All others can be handled without danger. They make delightful pets if properly fed with insects and given sufficient water and sunlight.

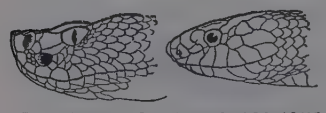
Most Scouts would think they needed no introduction to a snake. There are a few lizards, however, which resemble the snakes in having lost their limbs. The best known in America is the "Grass Snake" of our Southeast. This creature differs from all snakes in having ear openings and in being able to break off its tail when roughly handled.

The Snake Families

The snakes of North America are divided into five great families: the Blind Snakes, the Boas, the Colubrids, the Coral Snakes, and the Vipers. The first three families are harmless—so far as the American forms are concerned—while the latter two are dangerous to man. It is not difficult to distinguish the poisonous from the non-poisonous species.

Harmless Snakes

The vast majority of the snakes encountered by Scouts are harmless and most belong to the family Colubridae. The Garter and the Ribbon Snakes are readily distinguished by their conspicuous yellowish or greenish stripes. They feed on frogs, toads, fishes, and other creatures they can catch. The young are born alive, sometimes more than fifty at a time. The Garter Snakes are related to the Water Snakes which are usually darker and larger than the former. There are more than a dozen species of Water-Snakes in America, but all have very much the same habits. They frequent the



POISONOUS NON-POISONOUS

JAMSON (from Stejneger & Blanchard)

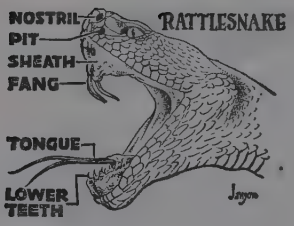
edges of streams and feed on frogs and fishes. As in the case of the Garter Snakes, the young are born alive. Both groups of snakes are equipped with evil smelling glands and hence do not make as good pets as the following.

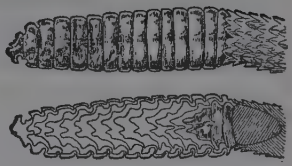
The Racers—include a group of powerful, and frequently slender snakes capable of moving at great speed. The common Racer in the East is the Black Snake, a useful ally of the farmer, for it destroys many rats and mice. The Black Snake is commonly confused with the Pilot Black Snake. The latter is a sluggish tree climber of an entirely different group. It feeds on both birds and rodents and is frequently found in mountainous regions where it is called the Mountain Black Snake. In the West the Black Snake is replaced by the Blue Racer, a slenderer and smaller species. In the South is the well-known Coachwhip, the fiercest in captivity and the speediest of all the Racers.

The Bull Snakes—are the most docile and gentle of all the large snakes in this country. They frequently attain a large size. They receive their name from their habit of hissing loudly when annoyed.

King Snakes—so called because of their cannibalistic habit of feeding on other snakes, are widely distributed over the United States. Their strong bodies are adapted to semi-burrowing habits. Some, such as the Milk Snake, feed almost exclusively upon rodents and are, therefore, of great service to the farmer.

Hog-nose Snakes—are great bluffers. They are sometimes called Puffing Adders because of their habit of hissing loudly when disturbed. Frequently a Hog-nose Snake will feign a spell of convulsions and turn over on his back as if dead. If the creature is turned right side up it will defeat its own purpose by promptly





Rattles

turning its under side up again. The eastern Hog-nose Snakes feeds largely on toads.

Poisonous Snakes

Coral Snake—Every Scout should be able to recognize at a glance any poisonous snake in America, except possibly the Coral Snake. The latter is a small species ringed with broad bands of red, yellow, and black. A few harmless snakes "mimic" the Coral in color. They are harmless, but it would be wise to leave alone, every snake gaudily ringed with red, yellow, and black, for *the Coral is the most poisonous of all American snakes.*

Others—The other poisonous species all belong to Viperidae and are at once distinguished from harmless varieties by their four "nostrils" (see sketch), the two posterior pairs, called facial pits, seem to be hearing organs, although they look externally like nostrils. The American viperids all are "Pit Vipers." There are two groups of these "Pit Vipers," those which possess and those which lack a rattle. The first are the Rattlesnakes of which there are a number of species in America. The second includes the Copperhead and the Water Moccasin.

The Copperhead And Timber Rattler—are the only two poisonous snakes in the Northeast. The Copperhead derives its name from its reddish brown color which

is brightest on the head. The back is marked with about fifteen "hourglass"-shaped marks of dark brown. Copperheads are sometimes confused with Water Snakes. The head is more angular than in the latter species and the facial pit distinguishes it at once.

The Water Moccasin — is the commonest poisonous snake in the Southeast. It is a southern snake. All "Moccasins" of Northeastern United States are harmless Water Snakes. It resembles the Copperhead closely, but is much darker and often larger. Further, its upper lips are yellowish and a dark band runs from the eye to the corners of the mouth. The Water Moccasin is frequently called the "Cotton Mouth" because of its habit of opening its mouth widely when approached, exposing the puffy white membranes lining its mouth.

Reptile Study

The study of reptiles is interesting and of importance for much less is known of these creatures. Where do the turtles, lizards, and snakes of your region lay their eggs? How long is it before these eggs hatch? Do the parents remain near the eggs? What will the young snakes eat? Where do they hibernate in the fall? It is such questions as these which Scouts who observe may answer.

A list of all the reptiles known from your region should be made at the beginning of the study. No Scout should pick up a snake of uncertain identity and should never handle a poisonous species.

Copperhead

Rattlesnake

Snake Stories

Snakes are perhaps the most misrepresented of all living creatures, for most people will believe anything they hear concerning them. Scouts will perform a great service if they will endeavor to correct some of the prevailing misconceptions that have been handed down from generation to generation.

Neither the Milk Snake nor any other species can suckle milk from cows. There is no snake that can roll about in the form of a hoop. No species anywhere in the world has a "stinger" in his tail. Snakes cannot "charm" birds or any other creatures, nor do they swallow their young for protection. The snake's tongue —the forked structure that protrudes from the mouth —is not a fang. A fang is an elongated tooth found only in poisonous species. Snakes die whenever they are sufficiently injured and they do not wait for sundown, although they may wiggle a long time after they are badly damaged. If one is cut in two, the pieces are not able to grow together again. Snakes are not slimy but dry to the touch and they never chase people. A triangular head does not characterize the poisonous species. The Spreading Adder, for example, is one of the most gentle and harmless of snakes. Poisonous Adders are found only in Africa.

Information in regard to reptiles may be obtained from your nearest Museum or from The American Museum of Natural History, New York, N. Y. The following books will be found of general use:

John Van Denburgh — The Reptiles of Western North America. California Academy of Sciences, San Francisco, California.

H. S. Pratt—A Manual of Land and Fresh Water Vertebrate Animals of the United States (Exclusive of Birds). P. Blakiston's Son & Co., Philadelphia.

Raymond L. Ditmars—The Reptile Book. Doubleday, Page & Company, New York.

J. E. Guthrie—The Snakes of Iowa. Bulletin 239, Agric. Exp. Station, Ames, Iowa. Iowa State College.

Conant and Bridges—What Snake Is That?

CHAPTER XXIII

HEALTH

By GEORGE J. FISHER, M.D.

Former Secretary, Physical Department International Committee Young Men's Christian Association, now Deputy Chief Scout Executive

Fitness

In the Scout Oath the Scout declares that he will keep himself "physically strong." Health is a most essential thing. A strong body is a boy's first great need. To be physically fit enables him more readily to become mentally alert and aids him in his fight to be morally straight. It is the base of the triangle; it is the keynote in the arch of the Scout Oath. Every Scout should seek through wise means to become physically strong. This means developing strong muscles rather than big muscles, muscles that respond quickly to the will, that are under command, that obey orders. They make a boy graceful, trim, alert. They help him to achieve, to win out, to endure.

The Scout Motto means Be Prepared in health as in all other things. Of what use will woodcraft be if one can't hike a mile without getting tired? What fun is camp life if one is so frail that he feels exhausted with every effort? How can one give the leadership and the help that people expect from a Scout, if he must think first about his own weak and delicate body?

This is clearly the Scout's personal responsibility. Parents, teachers, doctors may help, but it is what the Scout accomplishes for himself that really will count. Scouts do not have things done for them—they do them.

Exercise 1

Position: Heels together, arms down and at sides, palms in.

Movement: swing arms sideways, upward to vertical, and return.

Exercise 2

Same as Exercise 1, except that arms are swung forward, upward to vertical.

Exercise 3

Position: Arms at vertical.

Movement: Arm circles downward, inward, across chest. Reverse the movement.

Breathe deeply. Stand straight.

Do these exercises with windows wide open or outdoors.

Exercise 4

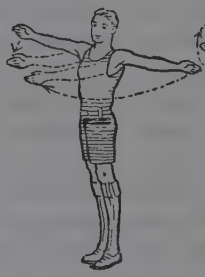
Position: Forearms flexed at side of chest.

Movement: Thrust arms forward and return.

Exercise 5

Position: Arms at front, horizontal, forearms, flexed, fingers on shoulders.

Movement: Swing backward to side, horizontal in position.

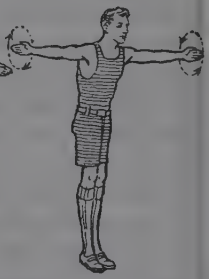


Exercise 6

Position: Arms extended to side horizontal.

Movement: Swing forward and return.

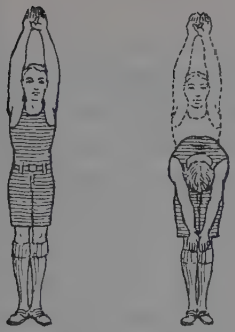
(Emphasis upon backward movement.)



Exercise 7

Position: Arms at side, horizontal, back slightly arched.

Movement: Circle arms backward.



Exercise 8

Position Arms at vertical, thumbs locked, head fixed between arms.

Movement: Bend forward as far as possible, without bending knees, and return.

Exercise 9

Position Hands on the hips.

Movement: Bend forward as in illustration. Head up.

Exercise 10

Position: Hands on the hips.

Movement: Sideward bend, right and left.

Breathe deeply all the time.

Exercise 11

Position: Same as Exercise 6.

Movement: Swing downward, forward, bringing arms beyond sides of body. Rise on toes with end of backward swing.

Exercise 12

Position: Same as Exercise 10.

Movement: Rotate body at waist.

Study illustrations.

Exercise 13

Position: Same as Exercise 10.

Movement: Raise high on toes.

(Hold shoulders back firmly.)

Exercise 14

Position: Same as Exercise. 10.

Movement: Full knee bend.

Breathe deeply.

Medical Examination

To secure endurance, physical power, courage, and skill, a Scout must have a healthy body. With a machine, one would want to know that each part was sound and in good working order before putting the machine to use. After a period of hard use one overhauls the machine again to find out the effects of wear and to make needed adjustments. That is the only way in which one can know the condition of his own body and determine if all of its parts are working properly, or if possibly some trouble is starting which could be corrected with proper attention. For this reason every boy is urged to have a careful medical examination once each year by his family physician or by the physician who serves as examiner for the Scout Patrol or Troop. He should submit the report of this examination to his home.

Growth and Strength

The chief business of a boy is to grow physically and acquire useful knowledge. He may have other interests but these are his chief concern. Hikes, camps, outdoor activities, these help to make the Scout physically strong, but the Scout cannot enjoy them to the utmost unless he is physically fit. Life saving, first aid, fire prevention, forestry work, making a tree survey for the Park, or taking a health census for the City—every Scout wants to take part in these fine Good Turns. He does not want to be handicapped in his service by physical weakness. He wants a healthy body and an alert mind. In the following pages are a few simple rules for living.

Proper Carriage

"Walk with head up and chest raised" is the secret of an erect figure. One can scarcely think of a round-shouldered Scout. Carrying the body proudly erect deepens and expands the chest and gives room for the abdominal organs to work properly. A few setting-up exercises in the correct position before breakfast each day will help greatly to get this result.

Outdoor Exercises

Two things greatly affect the conditions under which a boy lives in these days. One is that he lives indoors the greater part of the time, and the other is that he must attend school, which requires him to sit still for several hours each day. Two things, therefore, are needs of every boy; outdoor experience and physical activity.

Each day should have its outdoor exercise. Walking is a splendid form of exercise. The Scout should not wait for the Troop to go on a hike to take this exercise. He can walk to school or business; riding only when absolutely necessary because of too great distance. He should walk with a good swinging stride, with chest well up and body erect. Slow running across country is great; it lacks strain and yet affords splendid stimulation to heart, lungs, and muscles. Cross-country running and hiking should be favorite sports for Scout Patrols and Troops. Swimming also is excellent exercise. A boy who is physically fit should have at least two hours of sport daily in some good, vigorous game such as baseball or tennis. If he can possibly manage it, at least two periods a week, of an hour each, in a gymnasium where he can receive guidance in body building is excellent. Boys under eighteen should avoid such exercise as weight lifting, or sprinting over one hundred yards, or long-distance racing. Work on apparatus may prove harmful unless of the right sort. A

boy should be careful not to overdo. In his excitement to win in a contest he is likely to overdo this. He should never try to reduce his weight. Now that there are weight classes in sports for boys there is a temptation to do this and it may prove very serious. Severe training for athletics should be avoided. All training and gymnasium work should be governed by the recommendations of the examining physician.

Sleep

In connection with exercise, rest must be considered. One thing a growing boy needs a lot of, is sleep, and yet he is apt to be careless about it. It is during sleep that a boy grows most and "catches up." During his waking hours he tears down more tissue than he builds. Good, sound, and sufficient sleep is essential to growth, strength, and endurance. Physicians have agreed that between the ages of twelve and sixteen the following amounts of sleep are usually sufficient:

Years of Age	Hours of Sleep
12	10½
13	10
14	9½
15	9½
16	9

If one loses the full amount one day, he should make it up the next. When unusually tired, or when feeling out of trim, stay in bed a few hours longer if it is possible. A boy should wake up each morning feeling like a fighting cock. When he doesn't he should get to bed earlier that night. Sleep is a wonderful restorative and tonic. It helps to store up energy and conserve strength. If there is not enough sleep to meet

these needs, interference with health and growth may result.

The conditions under which one sleeps are as important as the length of time one sleeps. Many people find it wonderfully helpful and invigorating to sleep out of doors. By all means, the sleeping room should be well ventilated. Windows should be wide open when the weather is favorable. Avoid drafts. If the bed is in such relation to the window as to cause the wind to blow directly on it, a screen can be used, or a sheet hung up as protection. Good, fresh, cool air is a splendid tonic. In winter, sleeping with windows open is splendid preparation for camping out in summer.

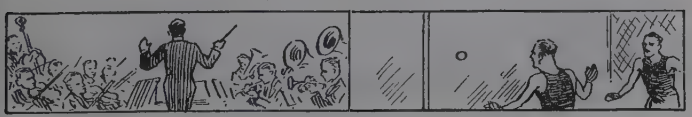
Baths

A boy should take a good bath with warm water and soap at least twice a week, and always after he has played a hard game or performed work that has caused him to perspire freely.

Daily he should take a quick sponge in water as cool as he can stand it. This should be followed by a good rub with a coarse towel. If there is a feeling of warmth after the rub, the bath is beneficial, if not, the water should be warmer.

Eating

The average boy should have and usually does have a good appetite. But the boy should be bigger than the appetite, and control it so that he never overeats, does not gulp down his food too rapidly, and does not eat the foods that he knows do not agree with him. Food that tasted for several hours after it is eaten is difficult to digest. The fact that it is tasted is an indication



that the stomach is having a wrestling match with the food.

A simple diet is best. Most boys eat whatever is before them. They mix pickles, soda water, frankfurters, and chocolate without fear or favor. No wonder there is so much stomach ache. Boys who do this frequently may have headaches and bilious attacks, which seriously impair their efficiency.

Here are some simple rules to follow: Don't eat when very tired; lie down until rested. Don't eat heavily before exercising, or, better, put it the other way around, don't exercise immediately after eating. Never eat when excited or angry, and eat very lightly when expecting to study hard. Learn to eat slowly enough to chew the food thoroughly. All food before it can be taken up in the blood must be in liquid form, hence chewing the food well will help the digestive organs greatly. Boys who cook their own meals when in camp should be careful to have their food well done, otherwise it will be difficult to digest. Be careful to wash carefully food that has been exposed to the dust. Drink five or six glasses of water daily between meals. Never use a public drinking cup.

Stimulants

A stimulant is a drug which excites or drives the organs of the body to greater activity than usual. It is not a food; it does not build up the tissues of the body; it does not add strength. It merely gets more work out of the various organs than they could normally yield. Of course, when the action of the stimulant has worn off, there is a reaction, and the vitality is lowered.

Coffee and Tea

Scouts frequently ask the question: "Should a boy drink coffee or tea?" Coffee and tea are strong stimulants, and a healthy boy does not need stimulants. Tea and coffee are not good for growing boys.

Alcohol and Tobacco

Alcohol is a stimulant, but following this the effect is very depressing. It dulls rather than stimulates the brain and nervous system. To a less extent this is true of tobacco. No growing boy should use either. The first athletes to drop out of a race are usually drinkers, and all trainers know smoking is bad for the wind.

Regular Bowel Movements

Those boys who are troubled with constipation may find the following plan helpful:

Drink a glass of water upon arising, then do body-bending exercises for two or three minutes. Follow this with the sponge bath. Then take a rapid walk around the block before breakfast, or if one has some outside work to do, that will serve the same purpose. After school play some favorite game for at least an hour. In the absence of this, take a good hike or two or three miles, or a longer bicycle ride. At least twice a week, if possible, attend a gymnasium class and make special emphasis of body-bending exercises.

Have a regular time for going to the toilet. A good plan is to go just before retiring and immediately upon arising. Go even though no desire is felt. A regular habit may be established by this method. Always respond quickly to the impulse for bowel movement. Eat-

ing whole wheat or graham bread, leafy vegetables, fresh or cooked fruits, and drinking six or seven glasses of water daily will be helpful. Hands should be washed every time after urination or emptying the bowels, and always before meals.

Care of the Teeth

Closely related to the matters of eating is the proper care of the teeth. Without care the mouth becomes very unclean. We spend a great deal of energy trying to keep food clean and water pure. The mouth also, through which all food enters the body, should be kept scrupulously clean. This is important to health and for aesthetic reasons.

Every boy should own his own tooth brush, if possible two brushes, one for morning, one for evening. The teeth should be thoroughly brushed at least twice a day: after breakfast and before retiring, they should be carefully cleansed, using a toothpaste, powder or any castile soap. Time should be taken in the cleansing of the teeth. The gums should be included in the brushing, as this stimulates the circulation of the blood and helps prevent gum disease. The biting edges of teeth should be scrubbed with a backward and forward stroke, and the other surfaces should be brushed from the gums toward the biting edges. In addition to the brushing, particles of food which are lodged between the teeth should be removed with dental floss after the last meal of the day. Hard toothpicks used for this purpose often cause bleeding and detach fillings.

Decayed teeth are dangerous to health. The cavities in which food particles collect and decay are favorable places for germs to grow, and through them poisons are absorbed and carried to other parts of the body. All decayed teeth should be treated by a dentist as soon as possible after the decay is discovered. A dentist should be visited once every six months in order to detect de-

cay immediately. Don't have a tooth extracted unless it is diseased or broken down beyond repair. A well-balanced diet including a quart of milk daily and leafy vegetables, fresh fruits and citrus juices, will help prevent tooth decay.

Care of the Eyes

Much trouble with the eyes comes from eye strain. Irritated eyes and red lids are usually due to this cause. It is useless, therefore, to treat these conditions without first treating the condition that causes them. Any inflammation of the eyes should be treated by a physician. Eye strain should be relieved by wearing properly fitted glasses. If constant headache is experienced or if the eyes itch or become tired easily, there is probably eye strain. Testing the vision is an important part of the physical examination.

Eyeglasses should always be fitted by a specialist and worn as he directs. They will probably need to be changed from time to time as the vision grows better.

For reading, a good, steady light is needed. Never sit facing a window to read. It is best to have the light come from the rear and over the left shoulder. The book should be held on a level with the face and not nearer than a foot from the face. Reading when lying down, or by the light of a fireplace is bad for the eyes.

Care of the Ears

Affections of the ears are exceedingly serious and may lead to grave results. A good specialist should be consulted regarding trouble with the ears. Pain, ringing or hissing sounds in the ears, and particularly discharge from the ear, or any signs of deafness, should be attended to immediately. Ordinarily the tick of a watch can be heard at a distance of thirty inches. If you cannot hear it at that distance and can hear it at fifteen inches, then you have just one-half of the normal

acuteness of hearing. The test should be made with one ear closed. The acuteness of the hearing should be tested by the physician who makes your physical examination.

Ear troubles are often caused by putting foreign objects such as hairpins, pins, matches, toothpicks, and lead pencils into the ear. Never pick the ear with anything. The ear drum may be pierced in this way. The normal ear does not require more than the daily cleansing with the wash cloth over the end of the finger. If wax accumulates to any extent it should be removed by a physician. If a foreign body should get in the ear it should not cause great alarm unless attended with severe pain. If a physician is not available at once such objects may remain for a day or two without serious results. In camp an insect might crawl into the ear and if alive cause pain. Putting oil or other fluids in the ear to drown it is unwise. Syringing will usually remove foreign bodies but it should be remembered that some objects like peas or beans swell if made wet. In swimming, water is apt to get into the ear and cause annoyance. A rubber ear stop can be placed in the ear to keep the water out. Cotton used for this purpose should be tightly rolled and large enough to prevent its passing into the ear.

A thing to keep in mind is that catarrh of the nose and throat often extends into the ear through the Eustachian tube which reaches from the throat to the ear. Syringing the nose and throat may cause trouble in the ear by washing infectious matter through this tube.

Care of the Nose and Throat

Always breathe through the nose. Air is warmed, moistened and cleansed in passing through the nose. If you cannot breathe through the nose, have it examined. There may be something wrong which needs immediate attention. To become a good athlete free

breathing is important. Adenoids, which are growths far back in the nose or throat, interfere with nose breathing and are serious in other ways. The finger or other objects should not be put in the nose. If crusts form in the nose, use a little vaseline to soften them, then blow the nose carefully. The nose should not be blown too vigorously nor should one side be held tightly while the other is being blown, for in this way infectious matter may be forced into the inner ear.

Frequent sore throat may be due to enlarged or infected tonsils which either need treatment or removal. To one who has frequent colds in the head, the out-of-door life, the morning cold sponge bath, and moderate eating will be beneficial.

Care of the Feet

Proper care of the feet is important to Scouts, as they will make frequent hikes and tramps. The first thing to do is to learn to walk properly, with the feet pointing straight forward. The normal foot is straight, broad at the ball, with space between the toes. Shoes, therefore, should be almost straight on the inner border, have sufficient width across the ball of the foot, and a low, broad heel. Shoes should fit the feet comfortably. Tight shoes, or shoes that fit too loosely may cause blisters, callouses or corns. The way to cure and to prevent these troubles is to remove the cause—namely, the bad fitting shoes. Sóft corns are due to pressure between the toes. The toes in such cases should be kept apart with cotton. Pointed shoes should be avoided.

When a foot is normal, the inner border does not touch the floor. By wetting the foot and standing on a dry unpainted board one can see readily whether or not he is flatfooted by the imprint made. The following exercises, preferably barefooted, are good to strengthen the arches if there is a tendency to flat foot. One should: (1) With toes turned in, raise the heels, and

come down slowly on the outer borders of the feet. (2) Walk with heels raised and toes pointing inward, or walk on the outer borders of the feet, inner borders turned up. One should never buy arches for flat feet at a store unless certain they are adapted to the need. A physician should always be consulted for treatment and his directions followed.

The pain from ingrown toe nails comes from the nail piercing the flesh. Allowing the nail to grow beyond the tender spot will help. Along the side of the nail and under the edge of it a very thin layer of cotton may be inserted to protect the soft parts. Hot foot baths will generally relieve tired feet.

Many boys are troubled with perspiring feet and are annoyed by the odor resulting. To prevent this the feet should be washed often and carefully, and dried thoroughly, especially between the toes. Dusting the feet with boric acid powder will help to prevent the odor. The stockings should be changed daily. Two pairs of shoes should be used, changing regularly, and airing the pair not in use.

Athlete's Foot

Athlete's foot or ringworm of the feet has become prevalent throughout this country. The infection is so serious that in many cases it is totally disabling. If not properly cared for it may spread to other parts of the body, especially to the hands and groins. Cracks in the skin or erosions caused by disease may become infected with pus germs and cause serious infections.

The cause of the disease is a parasite of the ringworm group similar to the mould which appears on stale bread and sometimes on plants. The infection usually

starts between the toes and may appear to be only a slight scaling or a small fissure in the skin. Frequently at these points, however, the skin is dead white and soggy and comes off in layers. The scaly type may appear on other parts of the foot, often on the sole or the upper surface. Another type of the disease appears as blisters on the inner side of the arch. When the blisters are opened a thick, glairy, clear fluid can be expressed. The infection may cause, also, thickening and discoloration of the toe nails. An infection of this kind should have the immediate attention of a physician. The approved measures for prevention of athlete's foot should be taken in all Scout camps. Directions for this can be obtained from State or City Departments of Health and should be instituted under the direction of a physician.

Care of the Finger Nails

The chief thing in the care of the finger nails is to keep them clean and properly trimmed. Each boy should possess, and use, a nail brush and file. One should always wash the hands thoroughly before eating and use the point of the nail file to remove the accumulation remaining under the nails. If too long, the nails are liable to break and be sensitive and uneven. Biting the nails mutilates the fingers, making them unsightly. It is a hard habit to overcome oftimes and requires persistent effort in order to succeed. By keeping the nails smooth and short the tendency to bite them will be lessened. A bitter application to the nails will often remind one of the habit, as often the biting is done unconsciously. The nails should not be trimmed with a knife. A curved pair of scissors may be used but the best method is to use a file. The skin overhanging the nails should be pressed back regularly to keep the nails shapely.

Pain

Pain in any part of the body should not be neglected, for it may be an indication of serious trouble. No matter where the pain is, it means that something is wrong. One may consider it brave to bear it, but it is not wise to do so until you know what the cause is and have done all that one can to relieve it. If there is severe or persistent pain in any part of the body, see the doctor for diagnosis and advice.

Conservation

In this chapter much has been said of the active measures which a boy should take in order to become strong and well. We should be equally concerned in saving and storing up the natural forces which we already have. In the body of every boy in his 'teens, a very important fluid is produced. This fluid is important to the whole body. Some parts of it find their way into the blood, and through the blood give tone to the muscles, power to the brain, and strength to the nerves. This is the sex fluid and is formed by the testicles. When it appears in a boy's body, it works a wonderful change. His chest deepens, his shoulders broaden, his voice changes, and his ideals are changed and enlarged.

When a boy reaches the age of 15, 16 or 17 (though it may be earlier, or later), this fluid is occasionally discharged from the sex organ in the night. This discharge is called a seminal or nocturnal emission. It may be accompanied by a dream. It is a perfectly normal experience. It may come several times a month, or only once in two or three months. A few boys and young men never have emissions. Boys need not and should not worry about these experiencese. They are natural, but no steps should be taken to excite seminal emissions. That is masturbation. It's a bad habit. It should be fought against. It's something to keep away from.

Keep control in sex matters. It's manly to do so. It's important for one's life, happiness, efficiency and the whole human race as well. Keep in training. A cold hip bath will help (water temperature 56 to 60° f., sitting in a tub, feet out, fifteen minutes at night before going to bed).

Seek advice from wise, clean, strong men. If you feel you need special help write to Physically Fit Department of BOYS' LIFE Magazine and you will get a confidential reply.

Every Scout should read "Keeping Fit," a bulletin for boys prepared by the U. S. Public Health Service. A copy of the bulletin can be obtained by addressing the U. S. Public Health Service, Washington, D. C.

Mental Health

When we consider health we must include mental health as well and we are calling on Dr. William C. Menninger, a Sea Scout Commodore and member of the National Committee on Health and Safety, to conclude this article with wise suggestions on that phase of healthful living.

"On my honor I will do my best—to keep myself—mentally awake." And so as Scouts, we take an oath, not only to keep ourselves physically strong, but also at our best mentally. But doctors have stressed physical health so much, that most of us have not known that there is more mental ill-health in the world than all kinds of physical sickness put together; nor do most of us know about any simple rules for mental health to guide us; nor are we able to recognize in ourselves those warning signs which indicate that we may not be managing ourselves for the best.

In the Scout Oath, the physical and mental sides are separated. Long ago it was believed that the mind and body worked independently, but now we know that they are not independent. When we are physically sick, we cannot be happy nor efficient; and when we are unhappy or worried, our physical health always suffers. And so it is necessary to think of the person as a whole —and that means all of him—his stomach and his hobbies, his nose and his interests, his red hair and his flat feet, and all the rest. And when something goes wrong with any one of these parts of him, he is "sick" and all the other parts of him suffer to some extent along with the sickest part.

To keep mentally alert, we must know what we mean by mental health. As we grow, our own ideas and interests change, and our life situation changes—from nursery to grade school, high school, college, business. And so in our development, we change, and the world is always changing, too. To be mentally healthy, we must meet these changes in ourselves and in the world, with a maximum of understanding and happiness, and efficiency. When we have temper outbursts, irritation, laziness, "dumbness," or unnecessary mistakes we fall short of our mental maximum, we fail a little or a good deal. When we fail badly, we may show "symptoms," such as worry, fear, "blueness," great excitement, and if these "symptoms" persist, we need the doctor's help.

Every day, most of us show some of these "signs" of our failure to maintain our best mental health, and so we are always faced with the problem of regaining our equilibrium. To do this, to keep "mentally alert"—we must know ourselves. We can always see how "dumb" the other fellow is, how stubborn, or how thoughtless, or how blind others may be, especially teachers, occasionally parents. But we rarely see ourselves so clearly. And our mental health depends on our ability to see our own flaws and failures, and to correct them.

The problem of understanding how our minds work,

—as we can understand our body organs—is difficult because it is so complicated. It is much more difficult to make a set of mental hygiene rules than physical hygiene rules, (for we must attempt to make rules of life) —rules that must govern our every action and thought, our attitudes towards our family, our friends, strangers, our work, our play, and most of all, ourselves. And even when we make the rules, we cannot always obey them, for there is a part of all of us that we cannot entirely control: we forget things we know, when we ought to remember them; we often like or dislike people on first meeting without knowing why; we like or dislike things without knowing why, for example, certain foods, or games, or jobs; we make slips or mistakes that we don't need to make, even though some of them embarrass us very much; sometimes we are depressed and don't want to keep up the "fight" without being able to give any good reason, or we are discouraged by very trivial events. When any of these things happen, we must attempt to investigate ourselves, and determine if we are living up to such rules of mental hygiene as we may know or can learn.

And so, even though we cannot always live up to them, we should know some simple regulations, and "do our best" to follow them. Because most people are more familiar with physical rules, we may use them as models.

"Brush your mental teeth regularly": we must keep ourselves mentally alert—our mental teeth sharp—and the only way we can do it is to regularly (like our teeth brushing) clean out our old out-grown ideas and replace them with new ones from books, superior people, travel, new experiences.

"Exercise regularly" applies to the mind as well as the muscles, whether it be mental gymnastics of Latin or arithmetic or any other mental task. But with such a rule, there are the same cautions of over-specialization and over-training. The smartest mental athlete is the one who is "all-round" and knows the dangers of too much study, too many responsibilities, too much activity.

"Plenty of Fresh Air" means that we keep the windows open and that we get out of doors regularly. And so mentally we can profit by keeping our mental windows open to receive new ideas, new friends, new interests. And we can do our best work when we arrange our atmosphere to meet our needs, when we shut out those things which annoy us and take into consideration those factors which will make us most efficient.

"Regular hours of rest" for mental health means that we must plan for relaxation and recreation. Every boy and every man, for his best mental health, should have his play, his hobbies, his regular outside interests. "A balanced Diet" when applied to mental health, means we must have a plan of life, which regularly includes in our daily program, some time for work, and study, and play.

"Cleanliness" which is so important in physical hygiene is even more important in mental hygiene. And it is closely bound up to our other promise of "morally straight." Cleanliness of mind means more than just being morally straight, important as that is. We must all learn that some things that are not regarded as morally wrong, cost us too much. One cannot be mentally healthy nor "mentally alert" if he wastes time, if he picks poor associates, if he reads trashy stories, in short if he does anything which he has learned from experience damages his understanding or his happiness or his efficiency.

CHAPTER XXIV

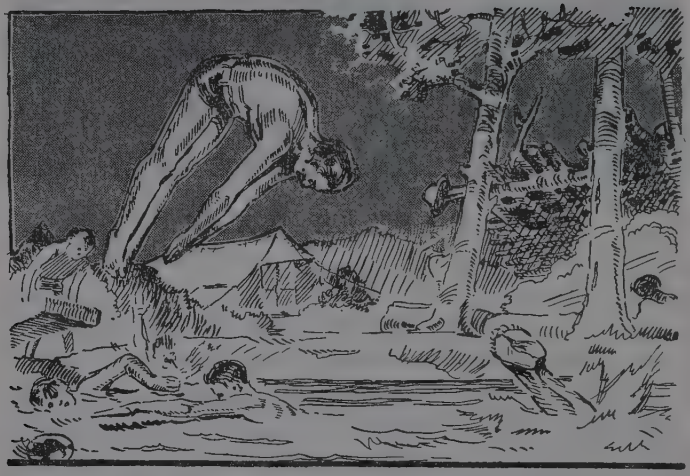
CAMPING

By L. L. McDONALD
The Camp Chief, Schiff Scout Reservation

Campcraft is the how-to-do-it of good camping. The Boy Scout learns Campcraft along with many other useful things in the most interesting way. In fact Campcraft features are so prominent that no Scout can reach First Class without being well on the way in the fundamentals of safe, efficient and enjoyable out-of-door living.

In America, boys and men as a rule, take readily to out-door life, because so many of our relatives and ancestors were pioneers, woodsmen, explorers, farmers, surveyors, ranchmen, and prospectors who had a part in discovering and developing the great natural resources of a new world.

These men had to live in the wilderness so much and found it so fascinating and wonderful that much of our National tradition and history is a story of camping, and adventure. Our first settlers in New England, Virginia, and the far West had to live first as campers. Every part of the country had to be carefully surveyed and mapped before new settlements could be made. Washington, while a boy of 19, was one of those surveyors and wilderness campers. Then there were Indian wars which required that settlers



must be able to be more clever than the Indian in order to follow him and deal successfully with these cleverest of daring hunters, who for many generations had made out-door-life a fine art. Daniel Boone and many others had to learn the Indian's tricks.

Then the lumber camps, construction camps, mining camps, made many other expert campers. Lincoln, while yet a boy, was one of those rail-splitters and woodsmen, and also a surveyor.

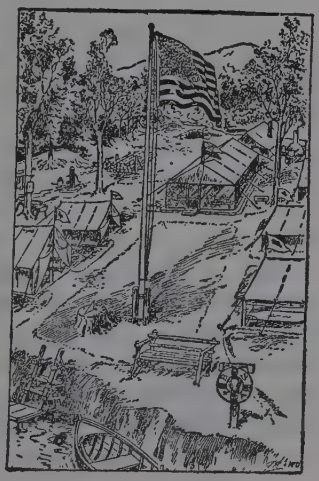
In the West the term "tenderfoot" was applied to the newcomer who didn't know the ways of the out-doors-man. His feet were tender until he learned how to travel long wilderness trails and rough country.

Camping nowadays is done more for the fun of it than anything else, but it is amazing how much there is yet to be done in the way of exploring and discovering things that have been overlooked or forgotten. We have such a wonderful country, so large and so varied, that even today we can't be really well-educated Americans unless we know our great out-of-door places.

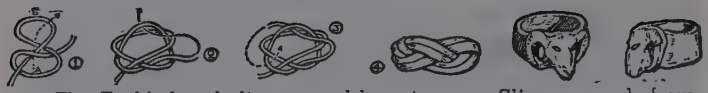
How To Become A Camper

The Tenderfoot must first of all learn how to find his way by using a compass. When the compass doesn't work or if there is none, one must depend on observation of land-marks on which you fix attention. A peculiar shaped tree, rock or perhaps a waterfall, something that is sure to be there when you go that way again. Did anyone ever hear of an Indian getting lost in the woods? And yet he never carried a compass. That is because he had formed the habit of keen observation of every landscape, and fixing it in mind in the same way we recognize people we meet without carrying a picture of each in the pocket. We remember because we are interested. Find something interesting along the road or trail, and it will be remembered. There are many ways of marking permanent trails. These are found on page 162. The most practical thing is to observe marks which make each trail or neighborhood different from every other and not to mar it by making too many new marks.

The general slope of the land, the main streams, lakes, kinds and sizes of trees, hill-tops, power lines, main roadways and railroads (if there are any), old logging trails and game trails are also good to keep in mind.



Begin right now. Practice describing to others how to find their way to various nearby places by natural objects or land-marks. A Scout Camper not only finds the way for himself, but can help others to do so.



The Turk's head slip-on, and how to tie your own

Slip-ons made from wood or bone

Another thing is to learn how to find the way at night when many of the usual signs cannot be seen. One is much more likely to lose the way at night, and may have to keep on going. Stars, hill-tops, lights, train whistles, barking dogs may help to keep your direction. See page 499.

Of course the best place to learn all these things is in camp, but the more one has developed this sense the happier he will be in camp.

Hiking and exploring are much harder and require far more preparation than camping out in a fixed camp. It is far better at first to go camping with one's Troop in some carefully selected place before trying to do any extensive hiking. There is so much to learn one will need all the time he has day and night. One must learn to do the many things for himself that others do for him at home and find different ways of doing them, and different things to work with. The Scout camper learns how to make himself as comfortable as possible under all conditions. The Tenderfoot may think it brave to "rough it" and disregard all comfort. About the second day out he cripples along with blistered feet because he doesn't know that campers must care for their feet. He can't take a street car or a limousine in camp, and comfortable feet are essential.

Next he develops a sunburn and a cold. He has to learn that clothing has real uses. Then he gets bilious and irritable and drowsy because he hasn't learned what and how much to eat, how to build a proper fire, do camp cooking or to sleep comfortably. A camper must get rest and sleep to keep himself well and ready for hard work and play. If it rains he gets wet be-

cause he doesn't know how to pitch or ditch his tent. He gets a cold because he shuts his tent so tight that there isn't a breath of fresh air. An old camper knows he must not waste anything and most of all he must conserve all his energy possible by careful eating, proper clothing, shelter from unnecessary exposure, and he must have a comfortable bed in which to rest, for sleep is vital.

So we turn our attention and ingenuity to ways of making ourselves comfortable, but remember that we must be able to do it ourselves.

How To Start

Here is the way a Troop of Boy Scouts from a large town in the part of Oklahoma, which was formerly the old Indian Territory, went about it to become good campers. They were all what we might call city boys and, although some of their fathers had been real pioneers and told wonderful stories of adventure in "the good old days," the younger generation, strange as it may seem, had never yet had a chance to do any camping. Fathers were too busy and the old range for miles in every direction was fenced, cultivated and "posted." "No hunting, no trespassing and keep off." When the Scout Troop was organized, every boy expected that this would be his chance to go to camp right away. Some asked even before they took their Tenderfoot test "If we join, how soon can we go camping?"

Fortunately, the Scoutmaster was an old-time camper and knew they had a great deal to learn first, which boys living out on the ranches or in the woods and mountain country learn by everyday life. So, he told them they would be getting ready right away, but, when they could really have a camp depended on how well they did their regular Scout requirements.

A Hike

On a Saturday afternoon, they went on a short hike to the edge of town to an old abandoned brick yard near a small stream where there were trees. Each wanted to cook over a camp fire of his own and they soon began to understand why the Scoutmaster had insisted that before they could have a real Troop Camp, there would be a great deal for them to learn. Of course, they had Scout axes and every Tenderfoot wanted to cut down a live tree to build his cooking fire. But that wouldn't do, and they went to get dead timber. Some picked the biggest dead trees they could find, but, of course, the ones who were wise enough to gather small dry branches requiring little or no chopping had their cooking done before the others got fairly started. Hardly anybody had brought salt or sugar in his pack and one boy used up a whole box of matches before he learned to use whittlings, very small twigs and dry leaves before piling on big sticks or logs on his fire. It was dark before they finished this first experiment and, after playing a Scout game they started for home determined to "Be Prepared" before the next hike. There was much practicing on fire building after school that week and home folks were answering all kinds of questions on how to fry and bake and broil and stew things over a fire out of doors.

A Treasure Hunt

But cooking wasn't all of camping. The next hike was called a "treasure hunt." By Patrols, they started on two routes, one going southwest, the other northwest, using the compass, they were to find a large elm tree where a note was to be found telling where to go next. Almost every kind of tree was called an elm by some boy. The note when found said "Go directly west one-eighth of a mile and find a message on or near a cottonwood tree." More use of compass—more discussion of how many feet and how many paces in one-eighth of a mile and "who knows a cotton-wood tree?"

Then they were to follow a certain stream till they came to a sand stone cliff and get some more directions under some willows. "Sand stone?" "Willows?" Finally, one Patrol located the hidden treasure—a big box of marshmallows—and made so much noise that the other Patrol which had entirely lost their trail came crashing in to share the spoils, displaying a note in which the trail maker had put "Go S. E.," when it should have been "S. W."

Sleeping Out

But sleeping out was yet to come on another short hike. They used grass and hay for beds, and carried shelter tents. One Patrol got ambitious and thatched a hut with long prairie grass. The frame-work was made of small cotton-wood poles lashed together and thatching put on in layers like shingles and tied to the frame

by heavy binder twine. They slept on the ground. It rained. The grass roof held, but after this first heavy rain the hut and each shelter tent was always carefully and thoughtfully ditched — for good and sufficient reasons!

More Hikes

For two or three months, practice hikes and overnight camps to places not more than three or four miles from the city were conducted to discover who was a good enough Scout to go with the party which was to make a real camp in the Arbuckle Mountains. Only those who could qualify would be accepted, for this was to be a Boy Scout Camp.

"Ikie" Landon could always produce from somewhere in his pockets or duffle bag, in any emergency just what he needed, buttons, needles, safety pins, a whetstone, string, *dry* matches, a piece of wire. First Aid supplies, an extra candle, a sharp knife. Clarence Brody always knew a new game or trick or story for around the camp fire. Jack Stevens could bake hunter's biscuits, and macaroni with cheese. Lee Higgins was always forgetting to bring enough to eat, begging eats from the rest of the gang. Dave Hoxie was so often losing his temper or "picking on" some little kid half his size. Dick Lyons was never without a compass and a road map. "Clokey" was thinking he could light fire without matches. Fred was an amateur weather prophet, knew signs, clouds and weather maps—always cheerful. All these facts were being noted (and many more) in selecting Scouts who were to qualify or be left at home.

When August came they had a picked party of nineteen campers.

Money enough had been saved to cover all necessary expense. Many ideas of what was necessary in equipment, food supplies, cooking utensils, First Aid supplies, had been discussed and decided by referring to old campers or published literature in the public library.

Off To The Hills

They hiked all the way to the mountains, tents and provisions only were carried on a wagon. There were no auto roads. They did all their own cooking—pitched their own tents, found their own way by map and compass and did real pioneering. The Scoutmaster went as advisor and took pot luck with the rest, but there was no shirking, no quitting, no quarrelling. The camp had all the necessary equipment, but no junk, no frills. The party was organized and was camping with a purpose; they were upholding the honor of the Troop, and the Scout Law was the law of the camp. Each had said "On my honor, I will do my best." And everything they could learn about out-door life would be useful in building a bigger Troop and a bigger camp for next year.

Every Scout A Camper

One thing every Scout looks forward to is Camp! It is one of the big things of Scouting—not only fun but Scout training and also learning to get along with other fellows, too.

As Local Councils and Troops are now universally running camps, every Scout is urged to accept every opportunity to attend and enjoy this camp training.

Indeed, when older Scouts have had sufficient experience as campers they may be used as camp leaders, thus passing on the investment already made in them. In fact, camp leadership is a real business. The aim of every Troop is to help give to every Scout his training in camping.

One's Own Outdoor Equipment

A First Class Scout has become something of an outdoorsman. He has learned how to be comfortable in the out-of-doors. One of the things he's wanted to do, probably, has been to have an outdoor kit of his own.

Whether he purchases one, or whether he makes it himself, it is important to decide just what should go into it. Naturally, he wants to get all the usefulness he can with as little weight and bulk as possible because every pound of weight is a load to a hiker. So in everything he hunts for light weight and small bulk.

Of course, the outdoor kit for use in southern Florida involves an entirely different problem from one for use in the Maine woods, summer or winter. The things one would take along, however, are strikingly the same:

1) *Some shelter* from rain, or sun, or snow.
2) *Some effective insect protection.*
3) *A sleeping bag* or *roll of blankets.*
4) *A Poncho* to do double duty.
5) *A pack* in which to carry them.
6) *Cooking gear*—a minimum, no extras.
7) *Minor equipment* and personal items.

One's own experience and observation of others' equipment gives ideas as to the best equipment. Details for the construction of most of these items are found in the handbook—"Adventuring for Senior Scouts."

1) Some Portable Shelter

While a day hike or an overnight trip can be made without a portable shelter, such as a light weight tent, the best experience recommends some such waterproofed shelter from the rain, or snow, or sun. Such shelters may vary from the simple rectanguler sheet as shown in the drawing or the Roester's tent, to more elaborate models such as the Dan Beard Tent used at the 1937 Jamboree in Washington.

The important items about a tent in addition to its light weight are 1) that it shall be waterproof; 2) that it shall be sufficiently streamlined to stand up in the wind.

The question of a ground cloth (or floor) for the tent can be decided later, if desired, as one can be sewed in. Where insects are a problem, the ground cloth probably will be worth its weight. The ground cloth, however, reduces the amount of air that gets in under the tent —which in cold weather is an advantage.

Waterproofing

Paraffin offers a simple way of waterproofing one's own materials. Smooth and iron out the cloth to be waterproofed, then take a lump of paraffin and rub it thoroughly into the fiber until it is colored white with

it—then press it in with a warm (not hot) iron. If the moistened finger makes the characteristic "popping" noise on the iron it is too hot and will vaporize the paraffin unduly. Cover the entire surface this way.

Another method is to dip the tent into paraffine dissolved in turpentine by keeping warm in a mixing vessel in very hot water.

2) Some Effective Insect Protection

This can be done in several ways. The tent opening can be covered with mosquito bar, or a canopy can be made to hang over the head and shoulders or may be made large enough to cover the whole length.

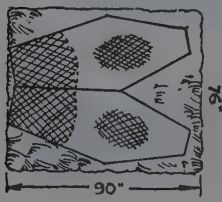
In places or seasons where insects are really bad, the tent opening may be closed with a mosquito bar "puckering string" at each end.

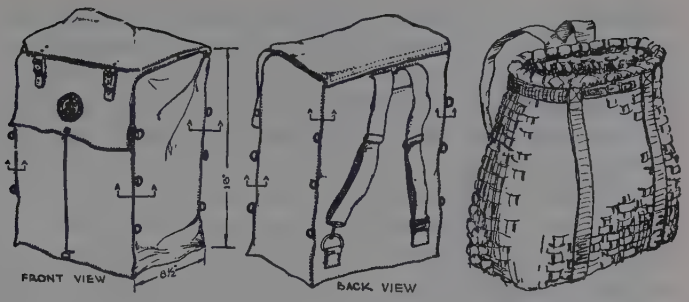
3) Sleeping Bag

The important features of a sleeping bag are

1) A full length waterproof cover or sack waterproofed top and bottom. 2) It should be made plenty long enough to fit the user and while the bottom may be narrowed to reduce weight, it should not be too tight for the feet.

If the bag is to be comfortable its width should be a foot on each side in excess of one's own width so as to have space enough to turn over when in the sleeping bag. Experiment with a newspaper until certain as to the right size.





While blankets may be sewed into a sleeping bag, it is probably more satisfactory to have them removable for washing. A zipper down the edge of the bag enables it to be quickly opened or shut—or snaps may be used or strings to tie it shut. An excellent way to get the most protection out of blankets is to lay them out flat one on top of the other—then lie down on them and reach to the right and fold that half of the top blanket over, then take the left half over that, thus securing a series of overlapping layers to keep in the warmth.

See illustration on page 498.

4) A Poncho

May be purchased or one can be made using material like that for the tent.

5) A Pack

In which to carry outdoor equipment is a convenience and, indeed, almost a necessity. It consists of two parts, a chassis—or frame with carrying straps and a body or container to hold various things.

6) Minimum Cooking Gear

The resourceful Scout can cook many things without pots and pans. He also can make a fork or spoon out of wood, if it be available. He can make a water bag out of heavy duck or canvas, if he waterproofs it

thoroughly. He should carry something to drink out of—perhaps an aluminum cup or a collapsible pocket cup. A homemade canteen can be made by covering a flat bottle with cloth. Dampen the cloth covering, then as the moisture evaporates, the water in the canteen is cooled.

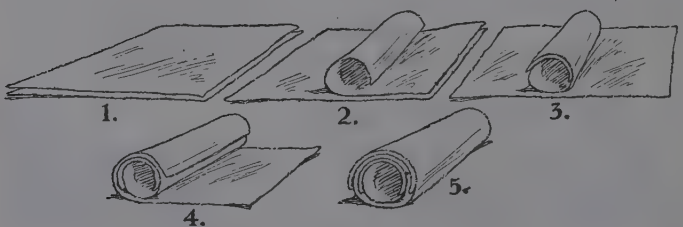
A small, fairly deep tin saucer can serve as a dish or for drinking, if weight and space are involved.

A skillet, small, light, and fairly deep is very widely used by outdoorsmen, yet it is surprising what one can cook on a flat rock,

It is recommended that each Scout experiment with his own success and preferences in fixing his minimum equipment—then keep it clean and sanitary.

7) Personal Equipment

As between the knife and the axe, probably the Scout Knife can meet most of the normal needs though in cold weather firewood is needed; frequently, however, small firewood can be broken up without an axe. A compass, a small fishlight, a small First Aid Kit and a bit of small but strong rope for an emergency are items one may want to have. Some protecting container for a few safety matches is quite essential and one may carry a tried bit of flint and steel for emergencies if desired. Tooth brush, a small cake of soap and a washcloth and small towel are among the necessities. Keep out unnecessary items.



HOW TO ROLL TWO BLANKETS INTO A WARM MUMMY CASE

WHAT TO DO IF LOST

Probably the best thing to do is not to get lost. Most Scouts will hike in country which is not unknown. As a very wise precaution, the Scout should prepare a small map of the general area, locating main features—as the lake or river here, town or camp, the main ridge or various peaks, etc., and their general relation to magnetic North. Secondly, if hiking into wide woods the Scout should carry a compass—though with the exception of prolonged rain, or clouds, or snow—sun and stars can identify directions. Of course, careful observation of the territory traversed also keeps one oriented. The stream or valley or ridge was crossed and camp, of course, lies back and beyond. Often one can back track on his own trail, especially in snow, if new snow is not hiding his foot prints.

There are two bits of quite different advice as to what to do if lost. One is to make one's self comfortable—building a fire and keeping it going day and night and waiting for searchers to come—making noise at intervals to attract attention. If injured or weak that is the only thing to do and do it preferably where the fire or smoke would be visible to searchers. The other plan says follow streams down stream and they will come to larger streams, settlements, roads, telephone wires, fences, etc. Down hill travel is less fatiguing and more rapid. "Circling" can be avoided by watching landmarks and continuous use of compass.

In either case unless carrying food, one must live off the country—therefore a knowledge of edible roots, nuts, fish and game of the section is something to know in advance. Following streams is probably a surer method than climbing to a high point to catch a view of one's surroundings, though there are exceptions to the rule. It was the plan followed by the twelve-year-old Scout who mastered this problem in the wilds of Maine recently. He kept cool—did not get panicky.

CHAPTER XXV

CITIZENSHIP

By H. W. HURT, Ph.D.; *Adapted from "My Citizenship," American Citizenship Foundation*

We American citizens of today often forget that for centuries dark with tyranny men dreamed and hoped sometime to have some voice in public affairs.

In recent years new tyrannies have brought oppression to innocent millions, who secretly pray for the simple liberties of peace and neighborliness among peoples.

Our American way has been and is an answer to such longings, for ever since Colonial days, it has afforded men precisely those opportunities.

Here, in our country first grew representative government under an agreed upon constitution. Here government has operated through officers elected by the citizens themselves. We have thought little of these things because we have always had them.

In our American Way, government derives its just powers from the consent of the governed. Dictators try to rob civilization of this hard earned advance by making the citizen exist for the state. America means human freedom.

These rights, however, did not come easily; they were the fruits of centuries bathed in blood, and what is more we must be ready to defend them. What are these rights you and I enjoy today?

Our Rights as Citizens of the U. S. A.

1. *The Right of Participation in* representative government.

2. *The Right of Self-realization*—the chance for education—to develop one's powers and to progress upward.

3. *The Right of Freedom* under law—freedom, religious; freedom of speech, of assembly and of the press.

4. *The Right of Protection* of life and property, of family and character.

5. *The Equal and Coordinate Rights of OTHERS* to just such peace and good will and outlook.

Though given to us, these things were bought and paid for in human blood; what we have without effort, someone else gave life to earn.

Every Man of Us Is Building Himself into a Citizen

That is the thrilling thing about citizenship, it is a heritage passed on from father to son. Each father builds himself into a citizen of whatever value may be and then as he passes on, his son who has been building himself into a citizen, comes on to take the father's place.

A Relationship

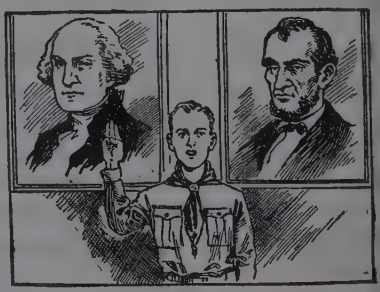
What then is the nature of this citizenship? What is it that binds a citizen to his country? Why have the Swiss shed their blood for their mountains, the Dutch for their dikes, the French peasants for their fields? What is it? This force is something unseen, something spiritual—it is a relationship. Relationships are the strongest things in the world. They hold like cables of steel.

Newton saw an apple fall—but he did not see the force that pulled it.

In the Argonne, Americans walked boldly into death, one could not see the force that pulled them! Gravitation and Patriotism are two relationships—they are invisible—yet one holds the swinging planets in their places, the other prompts men to duty or holds them true as steel to their sacred honor.

All relationships have two sides—they reach to one and extend from one. One's Country gives one protection but it exacts loyal allegiance. But citizenship is vastly more than trading allegiance for protection. Upon that legal skeleton, real citizens build the warm elements of patriotism, intense love of Country, loyalty to her, readiness to die for her or to live one's best for her.

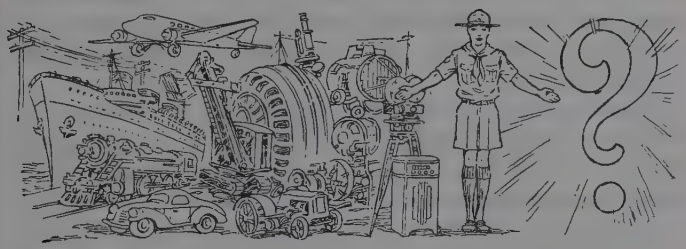
It means more than breaking no laws, it means positively adding value to our country. The "to-one" side of American citizenship is challenging—it is a wondrous heritage gleaned from all the world.



Like the youth of ancient Athens mentioned in Chapter V, we must pass this on not less but greater.

What Is This Heritage?

We have physical America, unmatched for beauty and for rich and varied resources,—the grandeur of her mountains—the peace of her great open plains—the majesty of her rivers—the cathedral silences of her green forests—the ceaseless waves which guard her shores,—great, beautiful, rich, and not yet overcrowded —our America!



We have Civilization, receiving free all the accumulated benefits of human rights growingly recognized in education and opportunity for each—of science, with its care for life and its multiplying comforts—of literature, with its printed pages of experience and ideals—of art, which in varied fields, reveals to us beauty—of invention, which has completely changed labor and leisure—of transportation and communication, which have subdued those ancient tyrants time and space—of brotherhood, extending good will and Good Turns.

The real heritage of a people is their ideas and ideals, the traditions of a just past, the lofty service of their unselfish leaders. The heritage of America (yours and mine) includes the prehistoric mound builders, the cliff-dwellers, the sun worshipping peoples of Central America, the fine, simple nobility of the American Indian, his religious devotion, his care of woman and child—

Longfellow in his Hiawatha has visioned clearly the Indian whose hunting grounds we usurped.

The hardy Norseman and other venturesome spirits who sailed uncharted seas—the fearless will of Columbus who braved storm without and mutiny within, until floating branch and winging bird announced America—these are ours.

Also the early Colonists who though guilty of pushing out another race, were not busied with plunder and booty, but with the stern task of hewing homes out of forest and soil. Practically every colonizing group was religious in character and brought the best ideals of their peoples.

Captain John Smith and the Virginia Colonies, the immortal Mayflower with its Puritans, the Catholics in Maryland and the French priests from Canada to the Gulf, the Wesleyans in the South, the Quakers in Pennsylvania—all these are part of the undying heritage of every American, born or naturalized.

Patrick Henry's "Give me Liberty or give me death," the fearless resolutions of James Otis, the Boston Tea Party, the midnight ride of Paul Revere, the Minutemen at Lexington, the memory of Bunker Hill, the fine gentlemanly leadership of Washington, the discouragements tracked in blood on the snow of Valley Forge, crossing the icy Delaware, the surrender of Cornwallis —these are events which quicken our patriot blood.

The old "Liberty Bell" sounding to the world our Declaration of Independence and human rights—then the problems of jealousies among the Colonies out of which Hamilton, Madison, Franklin, Jefferson, Webster,

Adams, Monroe, Clay, Calhoun and scores of others builded "The Union," the survival of European difficulties and the statement of the Monroe Doctrine—these are our own.

The Civil War, where the slavery and secession issue divided brother against brother, and which turned back the progress of the North a decade and the South a half-century—even this did not long check the onward sweep of invention and manufacture and production to which we are heir today.

The words of Lincoln—great hearted, humble as the log cabin of his birth, majestic in his simplicity, universal in his sympathy—

"With malice toward none; with charity for all; with firmness in the right as God gives us to see the right, let us strive on to finish the work we are in; to bind up the nation's wounds; to care for him who shall have borne the battle, and for his widow and his orphan—to do all which may achieve and cherish a just and lasting peace among ourselves, and with all nations," are our heritage, as are the herculean efforts of the men and women of Lee and of Grant to rebuild and recement America—these are our heritage from noble dead.

Ours also the fine, manly qualities of McKinley, under whose leadership America swiftly ended Spain's oppression in Cuba. We are heir to that great quickening of the public conscience which Theodore Roosevelt achieved among us—that dynamo of energy and ideals —"Teddy"—apostle of the strenuous life, lover of the out-of-doors, exemplar of the clean game, hard fought —his spirit lives on among us.

Then, too, ours is the idealism of Wilson, under whose leadership the millions of Americans went overseas and even "west" hoping to make the world safe for democracy. The heroism, nobility, the loss of self in serving others which our khaki-clad "dough boys" lived—that is our sacred heritage from "the crosses row on row." But ours too is the task to "catch the torch" they've flung from a sinking hand and to "carry on" that larger vision of citizenship alike to die or worthily live for our America. Ours is a nation dedicated to peace and fair dealing with all peoples.

This, Oh, Scout! is something of the heritage which, as citizens of these United States, is ours to use aright and fully to transmit to those who come after us.

What Shall We Return to America?

We should return Ourselves—but builded into the best citizens we can make of ourselves.

The Scout Oath points the way—building ourselves into citizens:

I. "Physically strong" because we build habits in obedience to the Physical Laws, the laws of the bodily machine.

1. *The Law of Cleanliness*—clean inside and outside.
2. *The Law of Regularity*—meals, sleep, work, play.
3. *The Law of Moderation*—neither too little nor too much.
4. *The Law of Maintenance*—food and rest.
5. *The Law of Doing*—Activity, work and play.

II. "Mentally awake" because we build habits of observation and reasoning upon the Laws of Experience.

1. *The Law of Attention* (Concentrate! One thing at a time).
2. *The Law of Experience* (Looking back, then looking forward).

3. *The Law of Action* (What I DO builds habits).
4. *The Law of Learning* (Other folks' experience saves time!)
5. *The Law of Desire* (We get what we rightly want).

III. "Morally Straight" because we build habits by consciously doing desirable things. There are five basic moral laws of standards:

1. *The Law of Truth* (No falseness).
2. *The Law of Honor* (Consciousness of living in truth).
3. *The Law of Justice* (Fairness—truth in action).
4. *The Law of Duty* (The return ticket from privilege).
5. *The Law of Love* (Brotherhood, courtesy—good will to all).

Not only squareness and fairness, but also service are necessary. Modern psychology says we "learn by doing," that we learn to swim by working at it—even so—we get to be good citizens by actually being useful citizens.

The Scout Good Turn is an advanced course in good citizenship—it shows its devotion to America by doing for America and her people.

That is the beginning of Good Citizenship.

What May We Fairly Expect a Good Citizen To Do?

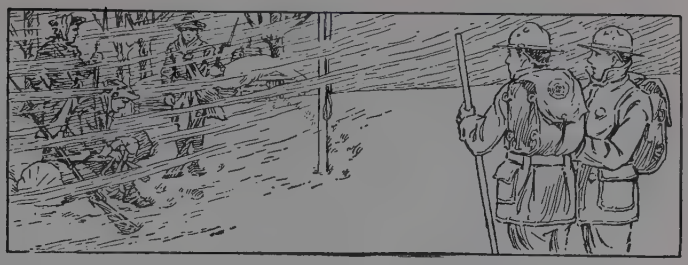
I. In his personal life —

1. *His Education*—Keep daily adding to his knowledge.
2. *His Business*—give honest value plus friendly courtesy.
3. *His Home*—never get too tired to bring to it his BEST side.
4. *His Church*—Identify himself actively.
5. *His Leisure*—spend it usefully and worthily (+ not —).
6. *His Health*—Keep physically fit and spiritually responsible.

II. In his public life —

1. *His Law Observance—set an example* of obedience.
2. *His Taxes*—honestly record and pay his part.
3. *His Vote*—To vote—wide-open-eyed and honestly.
4. *His Membership*—be actively associated in worthy groups that publicly and justly seek the common good of every American. His criticisms should be constructive, and given quietly to those concerned and should try to point the way to improvement.
5. *His Volunteer Service*—every community needs men to give time free for various charitable, religious, educational, public health and similar services—Scout leadership is such a service—jury service is another —public office sometimes is another.

Here is a simple active program of good citizenship within the reach of any average citizen—which universally practiced would solve most of our problems.



Some High Points in American History

1492 Columbus discovered America.
1497 John Cabot discovered the North American Continent.
1513 Ponce de Leon discovered Florida.
1519 Magellan sailed around the world. Cortez in Mexico.
1607 First Permanent English settlement, Jamestown, Va.
1608 Champlain founded Quebec.
1609 Hendrick Hudson on the Hudson River.
1619 Slaves brought to Virginia.
1620 Landing of the Pilgrims from Mayflower.
1626 New Amsterdam founded (New York City).
1634 Maryland founded by Lord Baltimore.
1636 Harvard College founded in Massachusetts.
1639 First press in America set up (Cambridge).
1752 Franklin experiments with electricity.
1761 James Otis argues against Writs of Assistance.
1773 Boston Tea Party—Daniel Boone in Kentucky.
1775 Minute Men at Lexington, April 19—Bunker Hill, June 17.
1776 Declaration of Independence, July 4.
1777 June 14, Official Flag adopted.
1781 Cornwallis surrenders—Yorktown, Va. Articles of Confederation.
1783 Peace signed with England.

1788 New Constitution ratified (1789-1796), George Washington, President.
1793 Whitney's Cotton Gin invented.
1796 First Permanent type foundry, Philadelphia.
1797 First cast iron plow—Charles Newbold, of N. J.
1800 Capital removed to Washington, D. C.
1800 India Rubber first introduced.
1812-1814 War with Great Britain.
1812 Stove invented with grates—Metallic pens made.
1815 First ocean steamboat trip—New York to Norfolk.
1819 Florida purchased by U. S. $5,000,000.
1823 Monroe Doctrine stated.
1825 Erie Canal completed.
1827 Baltimore and Ohio R.R. chartered and laid.
1829 Steam locomotive first used successfully.
1831 Manning patents first mowing machine.
McCormick invents first reaper (patented 1834).
1832 Pork Packing begins in Chicago.
1835 Morse invents magnetic telegraph.
1836 First typewriter and friction matches.
1839 Vulcanized rubber patented by Goodyear.
J. W. Draper takes first photograph from life.
1840 10-hour working day introduced in public establishments by Van Buren.
1842 First Factory for pocket knives established in Conn.
Anaesthesia first used by Dr. Long of Athens, Ga.
1844 Telegraph successfully used.
1846 Howe invents sewing machine.
1849 Gold rush to California.
1853 Gadsden purchase from Mexico.
New York Clearing House established.
Chicago reached by rail.
1856 First bridge over Mississippi at Rock Island.
1861-1865 Civil War—Lincoln, Davis, Grant, Lee.

1862 Agricultural Colleges first established by Federal Act.
1864 First sleeping cars—first postal money orders.
1867 First wood pulp paper—first steel rails in U.S.
1869 First transcontinental Railroad.
1869 Eight hour law for Federal Employees.
1870 First Kindergarten opened in Boston.
1876 Bell patents first telephone.
1878 Introduction of incandescent lights.
1880 U.S. takes first rank agriculturally among nations.
1886 Statue of Liberty unveiled.
1887 Beet sugar first produced (Alvarado, Calif.)
1892 Long Distance Telephone line, New York to Chicago.
1898 Spanish-American War.
1899 First Juvenile Courts (Chicago).
1902 First wireless message across Atlantic.
1903 Pacific Cable round the world message in 12 minutes.
1905 Power plants at Niagara Falls.
1906 Passage of Pure Food Drug Act.
1907 U. S. Fleet makes round the world cruise.
1908 N. Y. tunnels under East River and Hudson.
1909 Peary reaches North Pole.
1910 Boy Scouts of America founded.
1913 Parcel Post system started.
1914-1918 World War—U. S. World War 1917-1918.
1915 Transcontinental telephone service.
1918 First fabricated and first cement ships.
1918 Nov. 11, World War Armistice signed.
Senate rejects League of Nations plan.
1919 Reed flies across the Atlantic.
1919 June 28, World War Peace Treaty signed.
May 16-31 NC-4 U. S. seaplane flies across Atlantic.

June 14-15 First Trans-Atlantic Non-stop flight (Alcock, Brown).
July 2-6 R-34 British dirigible trans-Atlantic flight.
International Court of Justice (League of Nations).

1920 Jan. 16, 18th Amendment (Prohibition) in effect.
Aug. 26, 19th Amendment (Woman Suffrage) in effect.
Nov. 11 Unknown Soldier buried and memorial dedicated.
Limitation of Armaments Conference, Nov. 11-Feb. 6.

1924 March 16-Sept. 28, 3 U.S. Army planes circled globe.

1925 April 13 First commercial aviation line (Detroit to Chicago).

1926 Air mail service (New York to San Francisco).

1927 Trans-Atlantic flights. Lindbergh, Chamberlin, Byrd, Brock and Schlee.

1927 Kellogg Peace Pacts (14 nations).
Radiophone, New York and London.

1929 World Depression—Stock Market Crash.
Detroit-Windsor Bridge opened.
Admiral Byrd—"Little America"—Antarctic.

1930 White House Conference, Child Health and Protection.

1931 World's tallest building, Empire State, N. Y. C., completed.

1933 Pan-American "Good Neighbor" Conference.
Relief, C.C.C. Camps.

1936 G-Men cross state lines.

1937 Trans-Pacific Commercial Plane Service (April 28).

1939 Trans-Atlantic Commercial Plane Service (June 17).

White House Conference on Children in a Democracy.
World's Fairs—New York and San Francisco.
1940 Hemisphere Solidarity Conferences.
Selective Service Act.
National Defense Program.

The Presidents of the United States

No.	Names	Born	Inaugurated	Years in Office	Died	Native	Polit'l Party
1	George Washington	2/22/1732	4/30/1789	8	12/14/1799	Va.	Fed.
2	John Adams	10/31/1735	3/ 4/1797	4	7/ 4/1826	Mass.	Fed.
3	Thomas Jefferson	4/13/1743	3/ 4/1801	8	7/ 4/1826	Va.	Rep.
4	James Madison	3/16/1751	3/ 4/1809	8	6/28/1836	Va.	Rep.
5	James Monroe	4/28/1758	3/ 4/1817	8	7/ 4/1831	Va.	Rep.
6	John Quincy Adams	7/11/1767	3/ 4/1825	4	2/23/1848	Mass.	Coal.
7	Andrew Jackson	3/15/1767	3/ 4/1829	8	6/ 8/1845	S. C.	Dem.
8	Martin Van Buren	12/ 5/1782	3/ 4/1837	4	7/24/1862	N. Y.	Dem.
9	Wm. H. Harrison	2/ 9/1773	3/ 4/1841	1/12	4/ 4/1841	Va.	Whig
10	John Tyler	3/29/1790	4/ 6/1841	3 11/12	1/18/1862	Va.	Dem.
11	James K. Polk	11/ 2/1795	3/ 4/1845	4	6/15/1849	N.C.	Dem.
12	Zachary Taylor	9/24/1784	3/ 4/1849	1 1/3	7/ 9/1850	Va.	Whig
13	Millard Fillmore	1/ 7/1800	7/ 9/1850	2 2/3	3/ 8/1874	N. Y.	Whig
14	Franklin Pierce	11/23/1804	6/ 4/1853	4	10/ 8/1869	N. H.	Dem.
15	James Buchanan	4/23/1791	3/ 4/1857	4	6/ 1/1868	Penn.	Dem.
16	Abraham Lincoln	2/12/1809	3/ 4/1861	4 1/9	4/15/1865	Ky.	Rep.
17	Andrew Johnson	12/29/1808	4/15/1865	3 21/24	7/31/1875	N. C.	Rep.
18	U. S. Grant	4/27/1822	3/ 4/1869	8	7/23/1885	Ohio	Rep.
19	Rutherford B. Hayes	10/ 4/1822	3/ 4/1877	4	1/17/1893	Ohio	Rep.
20	James A. Garfield	11/19/1831	3/ 4/1881	13/24	9/19/1881	Ohio	Rep.
21	Chester A. Arthur	10/ 5/1830	9/20/1881	3 11/24	11/18/1886	Vt.	Rep.
22	Grover Cleveland	3/18/1837	3/ 4/1885	4	6/24/1908	N. J.	Dem.
23	Benjamin Harrison	8/20/1833	3/ 4/1889	4	3/13/1901	Ohio	Rep.
24	Grover Cleveland	3/18/1837	3/ 4/1893	4	6/24/1908	N. J.	Dem.
25	William McKinley	1/29/1843	3/ 4/1897	4 19/36	9/14/1901	Ohio	Rep.
26	Theodore Roosevelt	10/27/1858	9/14/1901	7 17/36	1/ 6/1919	N. Y.	Rep.
27	Wm. Howard Taft	9/15/1857	3/ 4/1909	4	3/ 8/1930	Ohio	Rep.
28	Woodrow Wilson	12/28/1856	3/ 4/1913	8	2/ 3/1924	Va.	Dem.
29	Warren G. Harding	11/ 2/1865	3/ 4/1921	2 5/12	8/ 2/1923	Ohio	Rep.
30	Calvin Coolidge	7/ 4/1872	8/ 2/1923	5/5 6/36	1/ 5/1933	Vt.	Rep.
31	Herbert Hoover	8/10/1874	3/ 4/1929	4		Calif.	Rep.
32	F. D. Roosevelt	1/30/1882	3/ 4/1933	8		N. Y.	Dem.

Wars

War is one of the tragedies of the life of the world. In its wake stalk sorrow, poverty, disease, moral let-down, debt, hatreds, fears.

One-third of the taxation of the world is either to pay for old wars or prepare for new.

War tears down civilization. The effort of home, church, school and state is for us to guard life and respect property—war says kill and destroy.

While all this is true, there are two kinds of wars —wars of aggression and wars of defense. Despite the peace hopes of the world's best thinkers, there are abroad in our world nations engaged in ruthless conquest. Force is the only logic they respect. Peace treaties have been cast aside. Under this threat America has armed and taken steps to curb anti-American plotters —but America arms for defense of her homes and her liberties.

The United States has had the following wars:

The Revolution 1775-1781—A war for independence from the misrule of a British minority.

War of 1812 1812-1815—A war with Britain because of continued violation of flag, impressment of our seamen, etc.

Mexican War 1846-1848—Irritation over repudiated claims became acute when the Republic of Texas applied and was accepted as a State. Mexico claimed Texas.

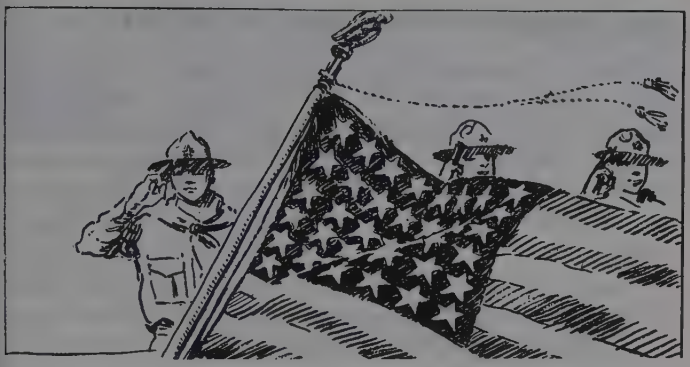
Civil War 1861-1865—Slave issue and secession privilege claimed by Va., N. C., S. C., Ga., Fla., Tenn., Ala., Miss., Ark., La., and Texas.

Spanish-American War 1898—Sympathy for oppressed Cubans, precipitated into war by blowing up of Battleship Maine.

World War 1914-1918—U. S. participation caused by German Powers refusal to respect American neutrality. (U. S. 1917-1918.)

While Scouts step forward to do their appropriate part to help America in any national emergency, they hope for a world where right is might and where friendliness may prevail.

The Boy Scout Movement around the world is creating world friendships, making community of interest among nations clear, and should help prevent future wars.



THE CONSTITUTION OF THE UNITED STATES

The Constitution of the United States, as stated in Chapter V, represents government by agreement. It is government which was not imposed from without but which grew up from within the desires of those establishing it.

It is good for all time, because in its own structure is provided the means to amend it through popular processes.

A most significant feature of this Constitution is its protection against dictatorship or kingship. It provides for three separate and coordinate branches of Government—the Legislative, the Judicial, the Executive—each to serve as an independent check against the others.

The well informed Scout should reread the Constitution in these troubled times and again see for himself what balance, what protection, what permanent assurances of personal liberty it guarantees. It, with the Declaration of Independence are to our American Republic what the Magna Carta was to the English Democracy—a sure foundation.

THE PREAMBLE TO THE CONSTITUTION

"We, the people of the United States, in order to form a more perfect union, establish justice, insure domestic tranquility, provide for the common defence, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity, do ordain and establish this Constitution for the United States of America."

Throughout the world there exist many different kinds of government. The most discerning test of these is not in name but in whence comes their authority.

Our American idea is that governments derive their just powers from the consent of the governed. The state therefore is the creature of the people and exists to benefit them.

In totalitarian states a minority has taken over power, centralized authority through force and purges, and set up the worn formula that people exist for the state.

With us, powers not delegated to the Federal Government belong to the States; powers not delegated to the States belong to cities and towns; while powers not expressly delegated to local governments (by legislation through our chosen representatives) belong to us —the citizens.

We in the United States enjoy the freedoms cited earlier in this chapter. All men are equal before the law. Opportunity opens before any youth willing to prepare. The chance of birth shuts no doors of opportunity to him. Education is free. Libraries stand with open doors. Every citizen enjoys freedom of action, limited only by the laws their representatives have set up in order to guarantee such freedom also to others.

"All men are created equal" says the Declaration of Independence, "and are endowed by their Creator with certain inalienable rights, among which are life, liberty and, and the pursuit of happiness."

"BILL OF RIGHTS"

The first ten amendments to the Constitution, known as the "Bill of Rights," contain nearly all the guarantees of personal liberties embodied in the Constitution.

So jealous were our forefathers of the rights of American citizens and so sure did they want to be that none of them would be invaded that, in order to "make sure doubly sure," soon after the adoption of the Constitution ten amendments safeguarding these rights were submitted to the people and adopted as promptly as possible.

These amendments—this "Bill of Rights"—are a summary of the long struggle of mankind for personal liberty and religious freedom.

They were intended to set at ease the minds of citizens who knew of the age-old sins of government. They were a kind of "safety first" precaution in connection with the new government which the Constitution had created.

ARTICLE OF AMENDMENT I.

Freedom of Religion, of Speech, of the Press, and Right of Petition

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise

thereof; or abridging the freedom of speech, or of the press, or the right of the people peaceably to assemble and to petition the government for a redress of grievances.

ARTICLE OF AMENDMENT II.

Right of People to Bear Arms not to be Infringed

A well regulated militia being necessary to the security of a free state, the right of the people to keep and bear arms shall not be infringed by law.

ARTICLE OF AMENDMENT III.

Quartering of Troops

No soldier shall, in time of peace, be quartered in any house, without the consent of the owner; nor in time of war, but in a manner to be prescribed by law.

ARTICLE OF AMENDMENT IV.

Persons and Houses to be Secure from Unreasonable Searches and Seizures

The right of the people to be secure in their persons, houses, papers and effects, against unreasonable searches and seizures, shall not be violated; and no warrants shall issue but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched and the persons or things to be seized.

ARTICLE OF AMENDMENT V.

Trials for Crime—Just Compensation for Private Property Taken for Public Use

No person shall be held to answer for a capital or otherwise infamous crime, unless on a presentment or indictment of a grand jury, except in cases arising in the land or naval forces, or in the militia when in actual service, in time of war or public danger; nor shall any person be subject for the same offense to be twice put in jeopardy of life or limb; nor shall be compelled, in

any criminal case, to be a witness against himself, nor be deprived of life, liberty or property, without due process of law, nor shall private property be taken for public use without just compensation.

ARTICLE OF AMENDMENT VI.

Civil Rights in Trials for Crimes Enumerated

In all criminal prosecutions the accused shall enjoy the right to a speedy and public trial by an impartial jury of the state and district wherein the crime shall have been committed, which district shall have been previously ascertained by law, and to be informed of the nature and cause of the accusation; to be confronted with the witnesses against him; to have compulsory process for obtaining witnesses in his favor, and to have the assistance of counsel for his defense.

ARTICLE OF AMENDMENT VII.

Preservation of Right of Trial by Jury

In suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury shall be otherwise re-examined in any court of the United States than according to the rules of the common law.

ARTICLE OF AMENDMENT VIII.

Excessive Bail, Fines and Punishments Prohibited

Excessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted.

ARTICLE OF AMENDMENT IX.

Reserved Rights of People

The enumeration in the constitution of certain rights, shall not be construed to deny or disparage others retained by the people.

ARTICLE OF AMENDMENT X.

Powers Not Delegated, Reserved to States and People respectively

The powers not delegated to the United States by the constitution, nor prohibited by it to the states, are reserved to the states, respectively, or to the people.

Part of the Preamble of the

DECLARATION OF INDEPENDENCE

In Congress, July 4, 1776

Unanimous Declaration of the Thirteen States

When in the Course of human events, it becomes necessary for one people to dissolve the political bands which have connected them with another, and to assume among the powers of the earth, the separate and equal station to which the Laws of Nature and of Nature's God entitle them, a decent respect to the opinions of mankind requires that they should declare the causes which impel them to the separation. . . . We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain inalienable Rights, that among these are Life, Liberty and the pursuit of Happiness . . . That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed.

Dan Beard's Recipe for Scouting

"Take a bowl full of unbounded love for boys, one pint of absolute faith in American institutions, two tea cups of American pioneer blood, one tablespoonful of thrills, one tablespoonful of romance, two heaping tablespoons of adventure, a teaspoonful of Indian traditions, a tea cup of vigor and grit of the Puritans, a tea cup of chivalry of the Cavaliers, a quart of the idealism of Thoreau, John Burroughs and Henry Van Dyke, one heaping cup of sentiment, the whole seasoned well with patriotism and character and stirred up with the Golden Rule, after which sprinkle well with the Stars and Stripes and SERVE RED HOT!"

CHAPTER XXVI

HANDICRAFT

(1) American Indian Craft

By RALPH HUBBARD

"To study and reproduce Indian ways and customs is no mere child's play!" said an eighteen-year old Scout after a summer in a Scout Indian camp. It is such a pity that most boys think of head-dresses, war-whoops, tomahawks and scalps the instant Indians are mentioned! This does them the greatest possible injustice, even though it be natural, since our chief contact with Indians in history has been warfare. There are so many thousand beautiful and desirable things in their lives that it is safe to say they can offer boys a mighty good code of sport and happiness. Good books on Indian Lore are so scarce that it takes time and labor to discover the wholesome, constructive side of the Indian, especially since our schools do not teach much concerning this subject.

So it is that the Boy Scouts of America have used Indian Lore all over the nation. The Scout who works with Indian crafts gains respect and friendliness for Indians. One can learn the crafts readily from books, but songs and dances are not to be found so

Stone Axe

well described in the literature. In fact it is almost impossible to learn the dances from books. The dances are not simply a series of yells and hops and arm-flinging, done with indiscrimination, but, on the other hand, are really scientific. The Reports of the American Bureau of Ethnology, found in most libraries, furnish more and better material on Indians than any other literature. Write the Museum of Natural History, New York, N. Y., for the books listed here:

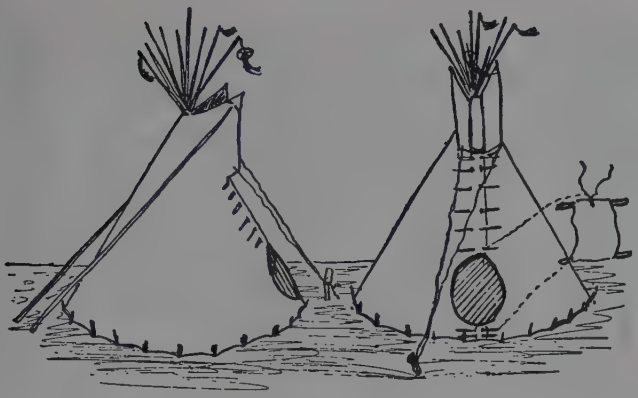
1. Indian Beadwork—(Pamphlet). $.25.
2. Indians of the Plains—Wissler. $.75.
3. Indians of the Southwest—Goddard. $.75.

The Boy Scouts of America publish these pamphlets: Beadwork. $.10. Indian Handicraft. $.40.

Why attempt to make a big war-bonnet first thing when a tepee furnishes so much sport and happiness for a whole Troop? To be sure, the rain runs down the poles when you have no "dew-cloth," and you get smoked out when you use "slow sticks" in the fire instead of "quick sticks," but in time you will learn to handle a tepee so that it will be a real home. When you make a tom-tom you will want to dance, which will next call for a costume but the professional Indian dancers and those who dance a good deal, do not want heavy costumes. A big headdress is beautiful, but a small, light decoration is much preferred.

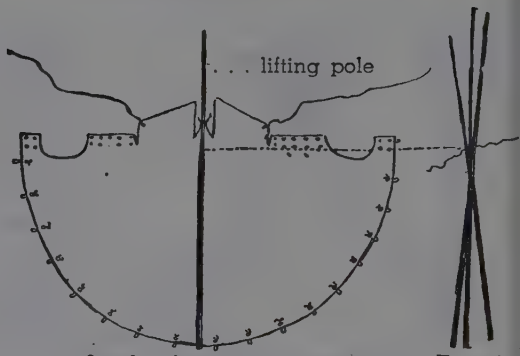
The Tepee

As shown in the pattern, the tepee cover is cut from a half circle of canvas or other goods. The overlapping areas used to pin the front together take off some, so that the actual cover when erected would not be half



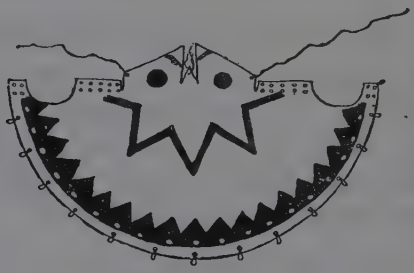
a circle. Using a complete half circle makes the whole structure too squat, and is very hard to manage. If one uses the proportions shown in the diagram, based on the half circle, a tepee can be made any size. On the next page the lifting pole is shown tied at the top even with the margin of canvas.

The tripod poles are tied about eight inches lower than the lifting pole, and they must have the rope around each pole to prevent slipping. In diagram we have the tepee skeleton erected, since the 12 poles have been laid in the tripod which is erected first. The base of the lifting pole is placed at circumference of base and some boy must hold it there while others hoist the pole and cover at same time, letting it fall in its place directly back of the doorway, which latter is usually faced toward the east. Next come the lacing pins in the front, then the flap poles as shown in first diagram. Various kinds of streamers, bits of horse tails and imitation "medicine" are suspended from the tips of the poles.



Inside of tepee cover

Tripod



Outside of tepee cover

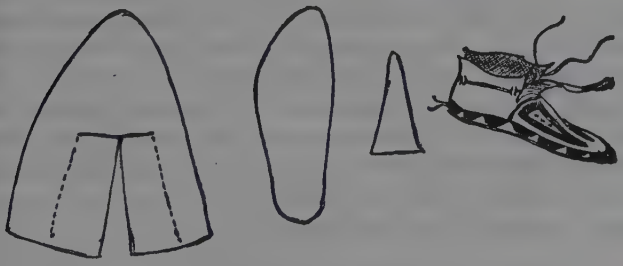
Moccasins

Two type of moccasins are shown, first the "Woods Indian." Any Scout with half an eye can make his own pattern from the suggestions here since he must make a pattern to fit his own feet anyhow. The material in the sole is gathered over the toes and about the instep with strong, waxed thread.

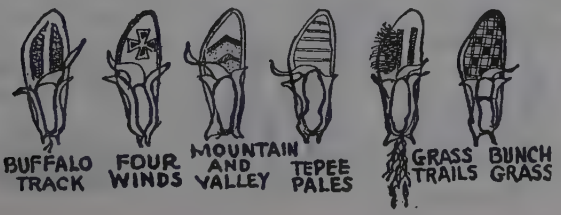
Woods Indians decorate their moccasins with porcupine quills, embroidery, paint and beads as do the Plains people, but more often have no decoration at all. The diagrams show six types of Plains moccasin decorations.

The second type of moccasin is the "Plains Indian," made from a sole cut the shape of the bottom of the foot, and an upper that fits over the instep and heel as shown in diagram. In both types the tongue is sewed on afterwards.

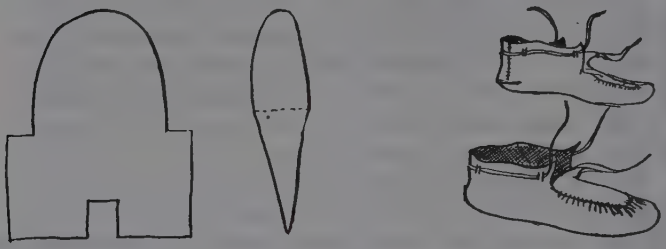
"PLAINS" MOCCASIN PATTERN



PLAINS INDIAN MOCCASIN DESIGNS



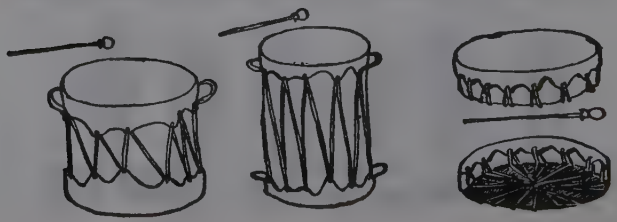
"WOODS" MOCCASIN PATTERN



A Tom-Tom

Making a tom-tom requires courage, for the calf, cow, deer or dog skin that is used has to be allowed to partly spoil in order to remove the hair. This is done by soaking the hide in a barrel of water thick with wood ashes or lime. Soft soap will often help the process. The skin side of the material must be scraped clean of fat and flesh then the two heads are laced as shown in the drawing. Sometimes single-head tom-toms give almost as good tones as double. All sorts of designs are painted on the heads according to the medicine of the tribe and the individual. The material used for drum heads, once shorn of the hair is called "par fleche," a French term used by Indians now, meaning "by the arrow."

THREE SHAPES FOR TOM-TOMS



Bows And Arrows

Indian bows and arrows are sometimes quite different from the archery materials used in the tournaments by our Scouts of today. The curves of the bow are secured by fastening the bow to a larger piece of wood and crowding blocks between the two where the curves are desired and steaming the whole in some moist earth several days. Hickory is used for curved bows almost entirely and where possible, they are nearly always backed with sinew or "par fleche" since they are only about four feet long.

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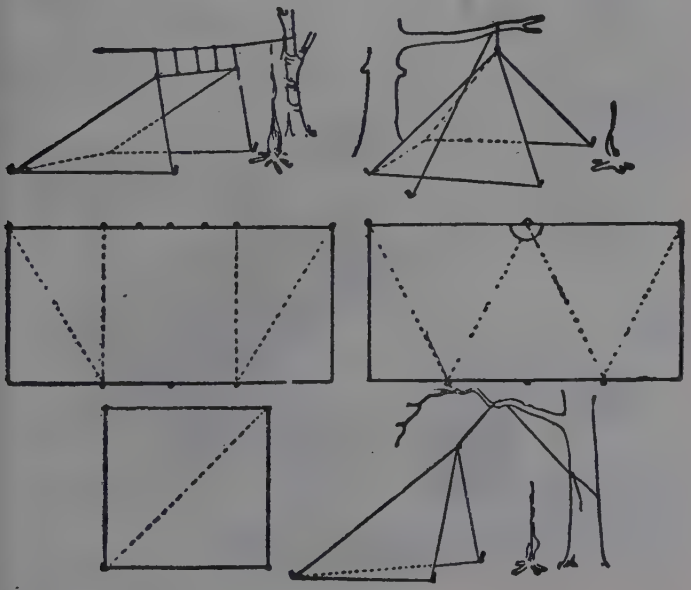
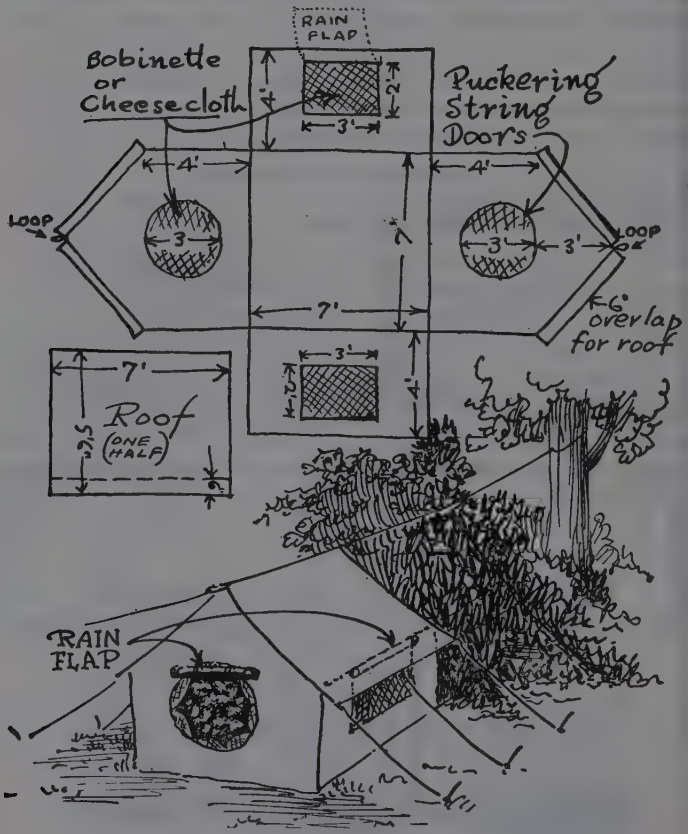
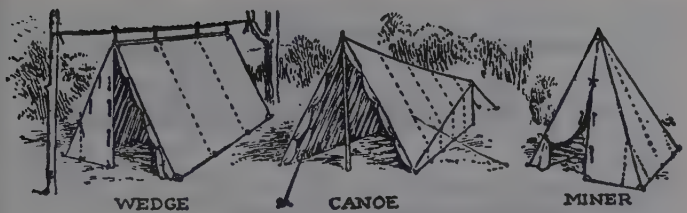
(2) How To Make A Tent



Open Outing Tent With Hood — This can be made from thirteen yards of 8 oz. duck canvas, which costs very little.

A Tent For Mosquito Country—Offered by the editor as being especially adapted for use in mosquito country in hot weather. Tent has floor cloth and weather flaps over cheese-cloth windows, and two puckering-string round doors, also with flaps.





(3) How To Make A Bow

1. Correctly proportioned bow. "The perfect weapon is a trifle stiff at the center, and the lower limb is a shade stronger than the upper."—Pope.

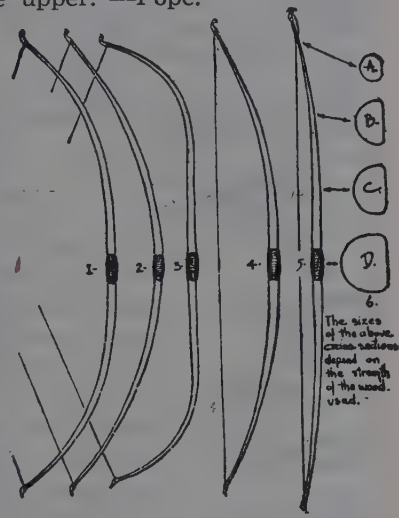
2. Incorrectly proportioned bow. Bends in center.

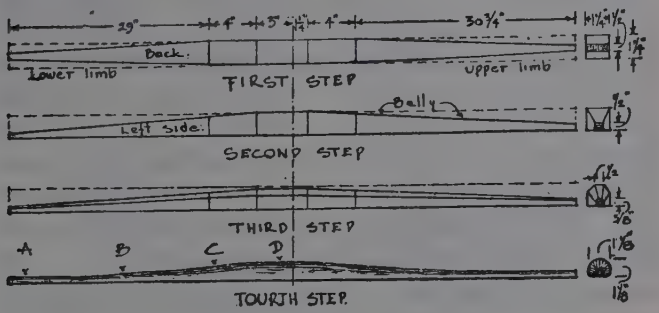
3. Incorrectly proportioned bow. Too much bend in mid-limbs.

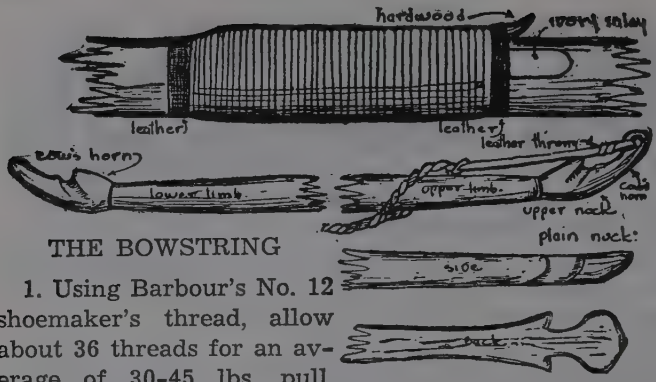
4. A well proportioned bow when braced.

5. A good bow at rest. Slight following of the string is not objectionable.

6. Cross sections.

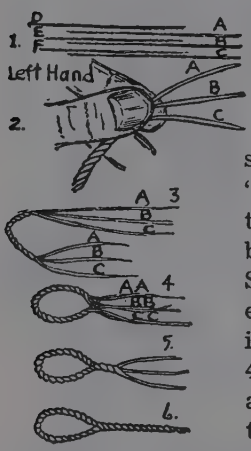




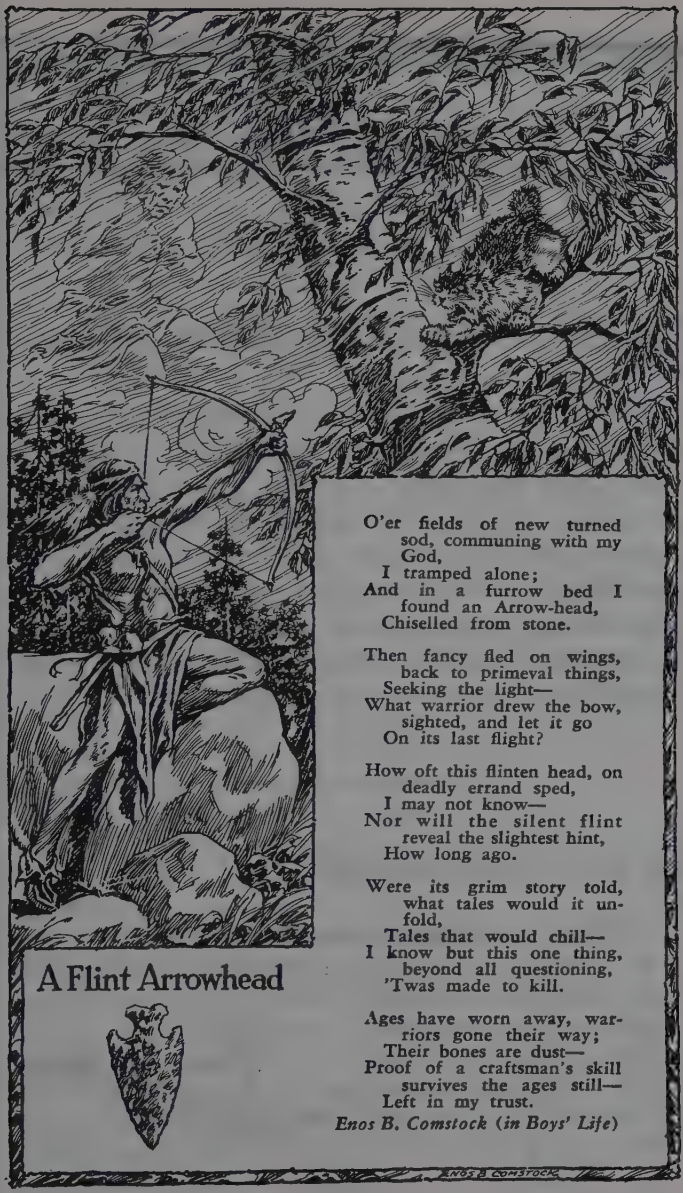


THE BOWSTRING

1. Using Barbour's No. 12 shoemaker's thread, allow about 36 threads for an average of 30-45 lbs. pull.



First stretch out on nails, spaced a distance 1 foot greater than length of bow, 3 strands "a," "b," "c," of 12 threads each. Wax each strand separately. Next make 3 strands of 6 threads each "d," "e," "f,"—12 inches long. Wax well. Now taper all ends by laying them upon board and scraping with dull knife. Short strands are now waxed into ends of long strands. 2. Starting 9 inches from end lay up like rope for 4 inches as follows: holding strands as shown, "a" is taken between thumb and forefinger of right hand, twisted away from you and is pulled over "b" and "c." "b" is then twisted away from you and pulled over "c" and "a." "c" then comes over "a" and "b." 3. Form loop and match strands. "a" with "a." "b" with "b." "c" with "c." 4. Wax together. 5. Proceed to lay up as in No. 2 for about 4 inches. 6. Finished loop should be smooth with gradual taper. Opposite end of string is built up the same as loop but is left straight for tying timber hitch around lower nock.



A Flint Arrowhead

O'er fields of new turned
sod, communing with my
God,
I tramped alone;
And in a furrow bed I
found an Arrow-head,
Chiselled from stone.

Then fancy fled on wings,
back to primeval things,
Seeking the light—
What warrior drew the bow,
sighted, and let it go
On its last flight?

How oft this flinten head, on
deadly errand sped,
I may not know—
Nor will the silent flint
reveal the slightest hint,
How long ago.

Were its grim story told,
what tales would it un-
fold,
Tales that would chill—
I know but this one thing,
beyond all questioning,
'Twas made to kill.

Ages have worn away, war-
riors gone their way;
Their bones are dust—
Proof of a craftsman's skill
survives the ages still—
Left in my trust.

Enos B. Comstock (in Boys' Life)

CHAPTER XXVII

FUN FROM GAMES, SONGS, BOOKS

Scouts, like all normal mentally awake young men, find fun and enjoyment. To the healthy chap, living itself is fun. Work is fun, if done in that spirit. Camping is a source of enjoyment and so are friends. To help someone else is fun. Games are lots of fun and so are songs around a campfire or on the hike. Books are gateways through which one may enjoy seeing the answers to questions come. This chapter outlines a few of the many sources of real fun and pleasure.

(I) FUN FROM GAMES

1. Follow the Leader *(game for any number)*

An active leader is selected who runs, jumps, crawls over, under, through obstacles, etc. — everyone following and doing the same. When one misses he goes to the tail of the line.

2. Buzz-Buzz *(3 Scout game)*

They stand sidewise facing in same direction—legs wide apart and with one foot of the middle Scout, just edge to edge against the "inside" foot of each of the other two. Each "outside" Scout places his "outside" hand over his "inside" ear (thus cutting off this middle Scout from view). Middle Scout wears a hat. He says Buzz-Buzz-Buzz-zz like a bee and touches the "head" hand of one of the Scouts who then may at once swing with his free "inside" hand to knock off the hat—the middle Scout meanwhile "ducking" while keeping his feet in place against his fellow players. When hat is knocked off the one doing so may become middle man.

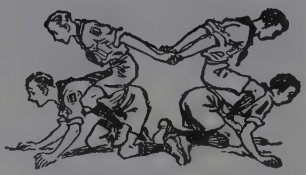
3. Rooster Fight *(any even number of players)*

With hands clasped around knees while in squatting position, two Scouts try to upset each other out of a six foot circle.

4. Let'er Buck *(any even number of players)*

A Patrol selects its best horses and riders, then challenges another Patrol. The "Broncho" must keep his hands on his knees—but otherwise may buck, plunge, dodge, squirm as he pleases to unhorse his rider. Rider must hold on with his knees keeping his feet back—he may hold the shoulder or back, but not the head, or neck, or about the body, or under the arms. If rider touches ground he's thrown. Three rounds—three minutes each. Score 1-3-5 for one, two and three rounds.

5. Tractor *(4 Scout game)*



Two Scouts on hands and knees, and facing in opposite directions, act as "Tractors." Team mate straddles tractor and holding on with his legs, reaches both hands back to grip hands of opponent. At the signal the "tug of war" begins. The one unhorsed or pulled back, loses.

6. Slap Jack *(any even number of players)*

Scout No. 1 places open hands, palms down, on the upturned palms of No. 2. No. 2 tries to pull one hand away quickly and slap No. 1's hands on the back. When he fails, No. 1 has his chance.

7. Pillow Fight *(2 Scout game)*

Two contesting Scouts straddle a pole, or stand on rail or log and try to unhorse each other by swatting with pillows.

8. Swat Tag *(any number)*

Instead of "*drop the handkerchief,*" one Scout runs around the circle and leaves large newspaper swatter in some Scout's hand (hands being held behind in the circle, everyone facing in). This Scout may then swat the player on his right all the way around the circle if he is fast enough. Then he puts the swatter in one

of another Scout's hands and rushes around the circle to get in that fellow's place.

9. Canoe Tilting *(4 Scout game)*

For four Scouts who can swim—two in each of two canoes, one to paddle, the other with a long tilting spear with heavily padded cloth end—bamboo fish poles are excellent. The aim is to tip the other fellow into the water.

10. Seize the Bacon *(any number of players)*

Two Patrols line up with thirty feet between the lines. They face each other and number through, thus there are two Scouts for each number—one in each line. Two "ones," two "sevens," etc. The "bacon"—a handkerchief, hat, or similar object lies on the ground in the exact center. The leader calls "sixes" and the two "six" Scouts dash out, each trying to grab the "bacon" and get "home" before the other "six Scout" tags him. Score: One point for getting safely home, or for tagging the Scout carrying the bacon.

11. Patrol Hide and Seek *(2 Patrols or more)*

Like the old 'Hide and Seek" game except when the Patrol Leader has hidden all of his Patrol, he returns to the base and announces "ready." He may then signal movements of the "It" Patrol as he desires. For every Scout caught before he tags the base, the "It" Patrol registers 1 score. Sides change when "Its" get a count of 10, or when entire Patrol is caught.

12. Scout Question Ball *(two Patrols)*

Fun can be had with all manner of question material for this game. Four bases and a pitcher's box. Patrols compete (more can play) one side gets to "bat." Game opens by "pitching" a Scout question at the batter. If he answers correctly (Scoutmaster or Patrol Leader as umpire) he advances to first base—if he fails, he is "out." Three "outs" retire the side. Scores are "forced" forward and "home."

Questions may be on First Aid, Signaling, Flag Respects, or almost any field of knowledge.

13. Treasure Hunts *(any number of players)*

A tracking, trailing and then finally finding game. A trail is laid by trail signs, or by distances and trees, or by compass directions to succeeding points, at each one of which a new direction is found which finally locates the treasure—probably "eats" or something of value. The Scoutmaster or Patrol Leader can plan this and lay the trail.

14. Patrol First Aid Race *(several Patrols)*

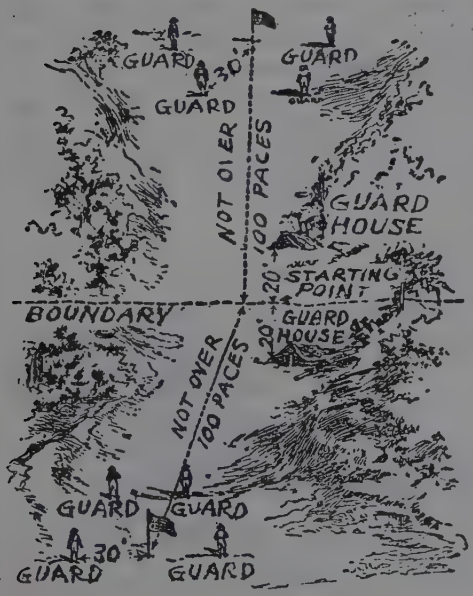
Patrols line up 50 yards from patient. At the leader's signal, Scouts run 50 yards to patient; apply

triangular bandage to head, and spiral reverse from wrist to elbow; put arm in triangular bandage sling; form four-handed seat and carry patient back at a walk. Team to furnish bandages, surplus bandages need not be brought back with patient. Judge—a doctor or first aid expert—shall disqualify team if all bandages are not correctly, neatly and firmly done, or if the Scouts run with or jolt the patient.

In official national contests the rescuing team consists of two Scouts, and the injuries (of which the above are a sample) are found written on a card pinned to the patient's clothing.

15. Capture the Flag *(2 Patrols or 2 Troops)*

The Scouts are divided into two camps, each with a leader and each having its own flag mounted on a light pole or a Scout staff. The players of one camp should be marked by a handkerchief or necktie tied around the arm so that a Scout can tell at a glance whether another Scout is a friend or a foe.



Any Scout found in the enemy's territory may be captured by grasping him and holding on while the

captor says, "Caught, caught, caught"! If he does not hold on long enough to say "caught" three times, the other Scout is not captured.

A starting point is chosen near the center of the line, and the game starts with the two Troops or camps assembled close together on opposite sides of the line, each in its own territory. The Scoutmaster explains the rules of the game, then blows one blast on his whistle as a signal for the two camps to set up their flags within one hundred paces of the starting point.

Guards must not stand nearer than fifty feet from the flag. The guards may follow an enemy into the 50-foot zone.

A prisoner may be released by a friend crossing the line and touching him while the prisoner is touching the guard house. Both are allowed to return free into their own territory unless the rescuer is caught by the guards before he touches the prisoner.

If the raider is caught before he reaches his home territory, the flag is set up again at the point where it was rescued and the game goes on as before.

If neither side captures the enemy's flag within the time agreed upon, which may be an hour, the Scoutmaster calls the game off by blowing the assembly call, and the game is won by the camp that has the most prisoners.

16. Antelope Race *(several Patrols)*

This is to be done by Patrols. The Scouts run in single file with hand on the belt of the Scout ahead. Falling down or breaking apart throws out the team. The distance is fifty

Antelope Race

yards and return, the turn being made to left. The Patrol wins whose leader first breaks the tape, provided the Patrol is unbroken throughout the race.

17. Skunk Tag *(any number of players)*

Skunk Tag

This game comes from the Sioux Indians. Each player holds his nose with one hand, holds up one foot with the other hand. As long as he keeps this position he cannot be tagged, but if he lets go with either hand he can be tagged by the boy who is "it."

18. Signaling "Bee" or "Spell-Down" *(any number of players)*

A Patrol Leader or good Scout signaler takes a position facing two or more Patrols and sends a letter (or words, depending on their knowledge) to the first Scout in each Patrol in turn. If received correctly that Scout is eliminated and the rotation goes on. The first Patrol to be entirely eliminated wins.

NOTE—This same method can be used in First Aid, Knots, Compass, Judging, Fire Building, Fire by Friction, and so on. Its advantage is that those who are "poorest" get the most practice.

19. The "Blind Man" Stalking Game *(any number of players)*

A Scoutmaster or Troop official is blindfolded—then the Troop or Patrol members who have kept back 50 yards are turned loose to "stalk" the Blind Man (to touch him) without being heard by him before they touch him. When the "blind man" points at a man and cries "halt," the umpire standing by decides the

man out. Patrol wins that "touches" first or most. The "blind man" should select a place where approach will be difficult.

20. Prisoner's Base *(2 Patrols)*

Goals are marked off at both ends of the playground. the Scouts divided into two equal Patrols, occupying the two goals. About ten paces to the right of each goal is a prison. A Scout advances toward the opposite goal, when one from that goal starts out to catch him. He retreats, and one from his side runs to his rescue by trying to catch the pursuer—who in turn is succored by one from his side, and so on. Every Scout may catch any one from the opposite side who has been out of goal longer than he has. Any Scout caught is conducted to the prison by his captor and must remain there until rescued by some one from his side, who touches him with the hand. The one who does this is subject to being caught like any other player.

21. Knot "Champ-Nit" Games *(two or more Patrols)*

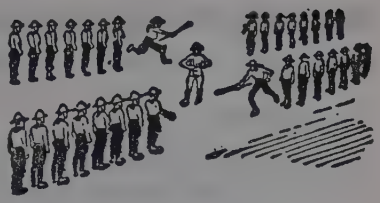
Within a Patrol, or between Patrols, knot tying contests may be arranged as a speed contest between pairs of Scouts or pairs of Patrols. The loser of each match is paired against other losers, until the "champion-loser" or "champ-nit" has emerged.

NOTE—From the viewpoint of Patrol instruction of its members, such a contest is very valuable, as it gives the extra practice to those who need it most, and in addition it is lots of fun.

This "set-up" may be applied to Signaling, First Aid contests, and so on. These contests eliminate the winner and reveal who needs the training and practice.

It is important, however, that this should not be used so as to humiliate those who are less rapid and thus discourage and further handicap them.

22. Relay Games



Relay games are excellent for competition between Patrols (or between Troops). The carrying of some object by each of the line in turn can be varied in many ways.

It can be used with signaling. Signal the message carried by the runner before you carry one you have to the next "signaler-runner." Some light obstacle across the running space adds zest. Horse and Rider, First Aid carries, and Wheelbarrow Race may be variations.

23. Holding the Front *(Patrol)*

A very simple Patrol game for hiking. Any of the "followers" may ask the leader a nature question "What is that?" If he cannot answer, the leader goes to the end of the line, the second boy becomes leader, and so on.

(II) FUN FROM SONGS

(See "Boy Scout Song Book" and "Songs Scouts Sing")

(1) America

Key: G. Time: ¾

My country, 'tis of thee,
Sweet land of liberty,
Of thee I sing;
Land where my fathers died,
Land of the Pilgrim's pride,
From every mountain side
Let freedom ring.

My native country thee,
Land of the noble free,
Thy name I love;
I love thy rocks and rills,
Thy woods and templed hills;
My heart with rapture thrills
Like that above.

Let music swell the breeze
And ring from all the trees
Sweet freedom's song;
Let mortal tongues awake,
Let all that breathe partake,
Let rocks their silence break,
The sound prolong!

Our father's God, to Thee,
Author of Liberty,
To Thee we sing:
Long may our land be bright
With freedom's holy light;
Protect us by Thy might,
Great God, our King.

—*Samuel F. Smith,* 1832.

(2) God Bless America

Key: F. Time: 4/4

God Bless America, Land that I love
Stand beside her, and guide her
Thru the night with a light from above;
From the mountains to the prairies,
To the oceans white with foam—
God Bless America. My home sweet home.

—*Irving Berlin.* ©

(3) The Star Spangled Banner

Key: B♭. **Time: ¾**

O say, can you see, by the dawn's early light,
What so proudly we hail'd at the twilight's last gleaming?
Whose broad stripes and bright stars, thro' the perilous fight,
O'er the ramparts we watched were so gallantly streaming.
And the rockets' red glare, the bombs bursting in air,
Gave proof thro' the night that our flag was still there!
O say, does the star-spangled banner yet wave
O'er the land of the free and the home of the brave?

On the shore, dimly seen thro' the mist of the deep,
Where the foe's haughty host in dread silence reposes,
What is that which the breeze, o'er the towering steep,
As it fitfully blows, half conceals, half discloses?
Now it catches the gleam of the morning's first beam,
In full glory reflected, now shines on the stream—
'Tis the star-spangled banner. O long may it wave
O'er the land of the free and the home of the brave.

And where is that band who so vauntingly swore,
That the havoc of war and the battle's confusion,
A home and a country should leave us no more?
Their blood has washed out their foul footsteps' pollution.
No refuge could save the hireling and slave
From the terror of flight, or the gloom of the grave,
And the star-spangled banner in triumph doth wave
O'er the land of the free and the home of the brave.

O thus be it ever when freemen shall stand
Between their loved homes and the war's desolation,
Blest with vict'ry and peace, may the Heav'n-rescued land
Praise the Power that hath made and preserved us
a nation!
Then conquer we must, when our cause it is just,
And this be our motto, "In God is our trust"—
And the star-spangled banner in triumph shall wave
O'er the land of the free and the home of the brave.

—Francis Scott Key.

(4) America the Beautiful

Tune — Materna

Key: C. Time: 4/4

O beautiful for spacious skies,
For amber waves of grain,
For purple mountain majesties
Above the fruited plain!
America! America! God shed his grace on thee,
And crown thy good with brotherhood
From sea to shining sea!

O beautiful for pilgrim feet,
Whose stern, impassioned stress
A thoroughfare for freedom beat
Across the wilderness!
America! America! God mend thine ev'ry flaw,
Confirm thy soul in self control,
Thy liberty in law!

O beautiful for heroes proved
In liberating strife,
Who more than self their country loved,
And mercy more than life!
America! America! May God thy gold refine,
Till all successs be nobleness,
And ev'ry grace divine!

O beautiful for patriot dream
That sees beyond the years
Thine alabaster cities gleam,
Undimmed by human tears!
America! America! God shed His grace on thee,
And crown thy good with brotherhood
From sea to shining sea!

—Katherine Lee Bates.
—Samuel A. Ward

(5) Scout Vesper

Tune: "Maryland, My Maryland"

Key: G. Time: ¾

Softly falls the light of day,
While our camp fire fades away;
Silently each Scout should ask
Have I done my daily task?
Have I kept my honor bright?
Can I guiltless rest tonight?
Have I done and have I dared
Everything to be prepared?

(6) Battle Hymn of the Republic

Key: B♭. Time: 4/4

Mine eyes have seen the glory of the coming of the Lord;
He is tramping out the vintage where the grapes of wrath are stored;
He hath loosed the fateful lightning of His terrible swift sword;
His truth is marching on.

Chorus

Glory! Glory! Hallelujah! Glory! Glory! Hallelujah!
Glory! Glory! Hallelujah! His truth is marching on.

I have seen Him in the watch-fires of a hundred circling camps,
They have builded Him an altar in the evening dews and damps;
I can read His righteous sentence by the dim and flaring lamps;
His day is marching on.

He has sounded forth the trumpet that shall never call retreat;
He is sifting out the hearts of men before His judgment seat;
Oh, be swift, my soul, to answer Him! Be jubilant, my feet!
Our God is marching on.

(7) 'Till We Meet Again

Tune: "Till We Meet Again"

Key: A♭. Time: ¾

By the blazing council fire's light,
We have met in comradeship tonight.
'Round about the whispering trees
Guard our golden memories.
And so before we close our eyes in sleep,
Let us pledge each other that we'll keep
Scouting friendships, strong and deep,
Till we meet again.

(8) Trail the Eagle

Tune: "On Wisconsin"
Key: G. Time 2/4

Trail the Eagle,
Trail the Eagle,
Climbing all the time.
First the Star and then the Life,
Will on your bosom shine,
Keep climbing!
Blaze the trail and we will follow,
Hark the Eagle's call;
On, brothers, on until we're Eagles all.

(9) Hail, Hail, Scouting Spirit

Tune: "My Hero," from "The Chocolate Soldier"
Key: B♭. Time: ¾

Hail! Hail! Scouting Spirit,
Best in the land;
Hail! Hail! Scouting Spirit,
Loyal we stand.
Onward and upward we're treading,
Always alert to make Scouting ready,
We are prepared.
Hail! Hail! Scouting Spirit,
Hail! Hail! Hail!

(10) Taps Song

Key: A♭. Time: 4/4

Day is done,
Gone the sun,
From the lake,
From the hills,
From the sky;
All is well, safely rest,
God is nigh.

Fading light
Dims the sight,
And a star
Gems the sky,
Gleaming bright,
From afar, drawing nigh,
Falls the night.

(11) Jamboree

Key: B♭. Time: 4/4

Jamboree, Jamboree, J-A-M-B-O-R-E-E
Jamboree—ree-ree,
Jamboree, Jamboree,
We are the Scouts of Chief B. P.

—by Jan Schaap.

(12) Home on the Range

Key: G. Time: 6/8

1

Oh give me a home where the buffalo roam,
Where the deer and the antelope play,
Where seldom is heard a discouraging word
And the skies are not cloudy all day.

(*Chorus*)

Home, home on the range,
Where the deer and the antelope play,
Where seldom is heard a discouraging word
And the skies are not cloudy all day.

2

Where the air is so pure, the zephyrs so free,
The breezes so balmy and light,
That I would not exchange my home on the range,
For all of the cities so bright.

3

How often at night when the heavens are bright,
With the light from the glittering stars,
Have I stood here amazed and asked as I gazed
If their glory exceeds that of ours.

4

Oh! I love these wild flowers in this land of ours
The curlew I love to hear scream;
And I love the white rocks and the antelope flocks
That graze on the mountain-tops green.

(13) Auld Lang Syne

Key: F. Time 4/4

Should auld acquaintance be forgot,
And never brought to mind?
Should auld acquaintance be forgot,
And days of auld lang syne

(*Chorus*)

For auld lang syne, my dear,
For auld lang syne;
We'll tak' a cup o' kindness yet
For auld lang syne.

(14) Old Mac Donald Had a Farm

Key: G. Time: 4/4

Old MacDonald had a farm,
E—I—E—I—O!
And on this farm he had some chicks,
E—I—E—I—O!
With a chick chick here,
And a chick chick there,
Here a chick, there a chick,
Ev'rywhere a chick-chick.

Old MacDonald had a farm,
E—I—E—I—O!
And on this farm he had some ducks,
E—I—E—I—O!
With a quack, quack here,
And a (——) quack quack there,
Here a quack, there a quack,
Ev'rywhere a quack-quack (——).*
(*Refrain*)

Turkey (gobble-gobble).
Pig (heink-heink).
Ford (rattle-rattle).

**Each stanza repeats after it has reached this point: all the material of the preceding stanzas between the signs* (——) *and* (——). *The fifth stanza in full would be thus:*

With a rattle-rattle here, etc.,
With a heink-heink here, etc.
With a gobble-gobble here, etc.,
With a quack-quack here, etc.
With a chick-chick here, etc.
Old MacDonald had a farm,
E—I—E—I—O!

(15) Pack Up Your Troubles

Key: A♭. Time: 2/4

Pack up your troubles in your old kit bag, and smile, smile, smile.
While you've a lucifer to light your fag, smile, boys, that's the style.
What's the use of worrying? It never was worth while;
So pack up your troubles in your old kit bag, and smile, smile, smile.

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(16) Git Along, Little Dogie

As I was walking one morning for pleasure,
I spied a cowboy all riding along.
His hat was throwed back and his spurs was a-jing-ling;
And as he approached, he was singing this song. (*Chorus*)

(*Chorus*)

Whoop-ee ti yi yo-o; git along, little dogies:
It's your misfortune and none of my own.
Whoop-ee ti yi yo-o; git along, little dogies;
You know that Wyoming will be your new home.

It's early in spring that we round up the dogies;
We mark them and brand them and bob off their tails.
We round up our horses, load up the chuck wagon;
And then throw the dogies out onto the trail. (*Chorus*)

It's whooping and yelling and driving the dogies;
And oh, how I wish they would only go on.
It's whooping and punching, go on little dogies;
You know that Wyoming will be your new home. (*Chorus*)

(17) Clementine

Key: B♭. Time: ¾

In a cavern in a canon,
Excavating for a mine,
Dwelt a miner, forty-niner,
And his daughter, Clementine.

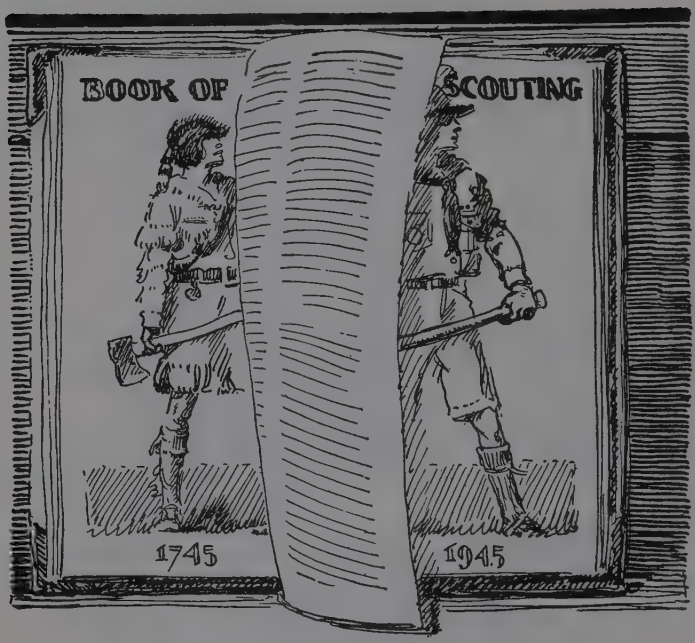
(*Chorus*)

Oh, my darling, oh, my darling,
Oh, my darling, Clementine!
You are lost and gone forever,
Dreffful sorry, Clementine.

Light she was, and like a fairy,
And her shoes were number nine,
Herring boxes, without topses,
Sandals were for Clementine.

Drove she ducklings to the water,
Every morning, just at nine,
Hit her foot against a splinter,
Fell into the foaming brine.

Ruby lips above the water,
Blowing bubbles soft and fine,
Alas for me! I was no swimmer,
So I lost my Clementine.



(III) FUN FROM BOOKS

When George Young, seventeen-year-old Toronto Boy Scout, swam the Catalina Channel, he set a new world standard of physical endurance and athletic skill. In the 15 hours 45 minutes and 38 seconds, he swam thirty miles to cover the 23 mile channel. His own story was very simple: "I just kept going."

This heroic exploit recalls the story of an apprentice boy who goes dreaming down the street of a little, then unheard of, town in far away Missouri. Suddenly he pursues a scrap of paper flying in the wind. A nearby fence offers lodgment momentarily, where the boy eagerly overtakes it. The vagrant piece of paper turns out to be a book page about the fair Maid of France and her heroic deeds. Only a page it was, but enough

to inspire a high resolution, which found fulfillment when the boy, become the man Mark Twain, writes "Joan of Arc," thought by many to be the best of all the books by the one American author well-known the world over.

Mark Twain and George Young have this in common—both made good use of their time. The one, by taking his reading seriously enough, became a writer of world renown; the other, by taking his swimming seriously, became a world champion. Each, like every Scout had his hobbies or interests and both Mark Twain and Young proceeded to find out everything they could about that hobby.

Here reading was to them, as to anyone else, an open door leading on and on into one's hobbies. What-

ever interest one has, there's a book on it (and perhaps a magazine also).

Oftentimes out of these interests there grows a life work—so it is that we have the Troop Reading Program—the Scoutmaster will want to talk with each Scout about what the Scout is interested in—and then help find the books thereon at the nearest library, two blocks or twenty miles away.

Then, too, there is the Reading Merit Badge which is open to Second Class as well as First Class Scouts.

Each year in November the National Reading Program service issues a list of "50 Outstanding Books for Boy Scouts and 25 Good Books for Cubs". These may be secured for five cents through the Scout Local Council office or by addressing the National Office at Two Park Avenue, New York, N. Y.

Then, too, as part of the Reading Program of the Scout Movement, there is that pioneer boys' magazine BOYS' LIFE written especially for Boy Scouts and made easily available through the Troop Budget plan.

So a big helping of fun (and real profit too) awaits each Scout in his reading. As he follows his hobbies through reading, he finds new fun and value. Also he usually discovers whole new lands, continents, oceans of things he'd never known about before. As Young learned his crawl stroke each Scout may easily get his own life stride out of reading the the fine stories, the adventures, the woodcraft, the science and inventions, the biographies—the great books of all ages, the classics which have marched down the years triumphant, moulding the lives of the men.

Thus any Scout by reading on his hobbies may come to know the great minds of all ages.

The Reading Merit Badge

The Troop Library of Scout Books

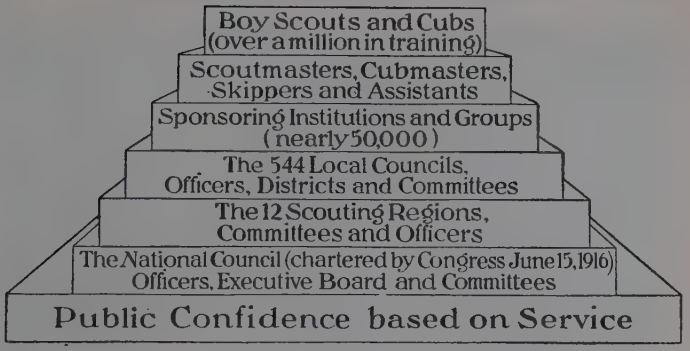
Many Troops have found that a Troop Library is very useful to Scouts. Usage recommends the following nine books as the first ones:

Handbook for Boys, Den Chief's Denbook
Handbook for Patrol Leaders, Sea Scout Manual
Camp-Lore and Woodcraft—Dan Beard
Scouting for Boys—Baden-Powell
History of the Boy Scouts of America
Adventuring for Senior Scouts
Swimming, Water Sports and Safety

Also the Boy Scouts of America publishes its Merit Badge Pamphlets and its various Scout Service Library booklets, a number of which are listed below: The Scout literature catalog contains a larger list. Each year's "50 Outstanding" lists the new ones: "Everyboy's Library" contains 21 selected titles at $1.00 each. Scouts will find the greatest boys' books of all time in the New Boy Scout Book Shelf. Ask about it.

The Boy Scout Diary	$.15	The Yucca Patrol Idea	$.15
Tenderfoot Helps	.20	Patrol Leader's Record Book	.10
Second Class Helps	.20	Troop Stunts	.25
First Class Helps	.20	Scouting with a Neckerchief	.10
Boy Scout Song Book	.15	Sea Scout Patrol	.05
The Pine Tree Patrol	.50	Sea Scouts Afloat	.20
Camp Buildings & Scout Shelters	.20	Bird Record	.20
Camp Fires & Cooking	.35	Camp Fire Helps	.40
A Camporee Plan	.15	Jamboneering (Camp Equipment and Plans)	.50
Indian Handicraft	.25	Archery	.20
Boat Building & Canoe Repair	.30	Totem Poles	.35
Bird Homes	.25	Nature Collections	.20
Book of Scout Plays	.35	Kites	.30
		How to Spin a Rope	.30
		The Scout Circus	.25
Pets	.40	The National and World Jamboree in Pictures	.50
The 1933 Scout Jamboree Book by Dr. J. E. West	1.75		

APPENDIX


Boy Scouts and Cubs
(over a million in training)
Scoutmasters, Cubmasters,
Skippers and Assistants
Sponsoring Institutions and Groups
(nearly 50,000)
The 544 Local Councils,
Officers, Districts and Committees
The 12 Scouting Regions,
Committees and Officers
The National Council (chartered by Congress June 15, 1916)
Officers, Executive Board and Committees
Public Confidence based on Service

APPENDIX

SECTION A

THE SCOUTING MOVEMENT

The Scouting Movement is a locally organized, nationally aided and protected effort on the part of over a third of a million men in the United States to enrich the lives of boys. Back of the Scouting Troop meeting and the Uniform and Badge and the Oath and Law, is a great organization of interested men giving their time, most of them, as Scouting has only about 1,800 paid men to serve, train and help these volunteers.

The Scout Movement is non-sectarian, non-political, non-commercial. It has been chartered by Congress as a leisure time educational program for Boys. Back of these boys are many men to serve as friends to them.

BACK of the

Scouts and their junior officers are
Scoutmasters and their assistants—then
The Troop Committees—then
The parent Institutions (Church, etc.,)—then
The Local Councils and their Committees—then
The Regional Supervisory Service Men—and then
The Committees of the National Council.

The National Council is the controlling body of the Movement and its membership is derived mainly from the local organizations, and then by Act of Congress, this National Council controls the standards of Scouting in the United States. It meets annually and its Executive Board meets five times throughout the year. The Executive Committee of the Executive Board meets monthly except during July, August and September.

The Local Council in any City is composed of representatives of every parent institution and also enough members chosen at large in the City, to have all religious and civic groups represented.

A democratic organization indeed! Then this Council elects one or more members (depending on the number of Scouts) as delegates to the National Council, which by Congressional Charter is the controlling body of the Movement.

The following are the officers of the Boy Scouts of America, 1940-1941.

Honorary President—Franklin D. Roosevelt
Honorary Vice-President—Herbert Hoover
Honorary Vice-President—Colin H. Livingstone
Honorary Vice-President—Daniel Carter Beard
Honorary Vice-President—William G. McAdoo
President—Walter W. Head, St. Louis, Mo.
Vice-President—John Sherman Hoyt, Darien, Conn.
Vice-President—Stuart W. French, Pasadena, Calif.
Vice-President—Theodore Roosevelt, Oyster Bay, N. Y.
Vice-President—Mell R. Wilkinson, Atlanta, Ga.
Vice-President—Frank G. Hoover, North Canton, O.
National Scout Commissioner—Daniel Carter Beard, Suffern, N. Y.
Treasurer—Lewis Gawtry, New York, N. Y.
Chief Scout Executive—James E. West
Deputy Chief Scout Executive—George J. Fisher

ADVISORY COUNCIL

Stuart W. French — Colin H. Livingstone
Howard F. Gillette — John M. Phillips
Mell R. Wilkinson

Executive Board Members

TERM EXPIRES 1941	TERM EXPIRES 1942	TERM EXPIRES 1943
F. A. Bean	Daniel Carter Beard	L. W. Baldwin
John M. Bierer	James H. Douglas, Jr.	W. Warren Barbour
Sheldon Clark	Lewis Gawtry	William J. Campbell
Charles E. Cotting	Walter W. Head	Harmar D. Denny, Jr.
Marshall Field	Harry C. Knight	Frank G. Hoover
Elbert K. Fretwell	Byrnes MacDonald	Amory Houghton
Francis W. Hatch	William C. Menninger	John Sherman Hoyt
Wheeler McMillen	Eugene D. Nims	Paul W. Litchfield
Philip L. Reed	E. W. Palmer	Raymond F. Low
Victor F. Ridder	H. R. Safford	Reginald H. Parsons
Theodore Roosevelt	Paul W. Schenck	William H. Pouch
R. Douglas Stuart	George Albert Smith	G. Barrett Rich
Daniel A. Tobin	Robert P. Sniffen	Earl C. Sams
Thomas J. Watson	Charles L. Sommers	John M. Schiff
Frank W. Wozencraft	Ray Lyman Wilbur	Frank L. Weil

Membership in the National Council is limited to American citizens whose service in Scouting is entirely voluntary.

Persons engaged professionally in Scout work in any form shall be ineligible to membership in the National Council.

The Executive Board

The National Council at its Annual Meeting elects one-third of its Executive Board, of not less than thirty nor more than forty-five members, which Board, with its Executive Officers, is charged with the responsibility for all questions of business administration and supervision.

It grants charters and credentials, copyrights insignia, determines equipment, publishes literature, provides National Court of Honor, protects the Movement from exploitation and cooperates with civic authorities in developing the program of Service.

The Executive Board works through an employed staff of officials under the leadership of a Chief Scout Executive.

SECTION B

BRIEF HISTORY OF SCOUTING

In the early part of the 20th Century, there sprang up numerous organizations fostered by churches and voluntary associations which organizations desired to help boys meet the problems of leisure.

In 1907 Lord Baden-Powell (then General) conducted an experimental boys' camp at Brownsea Island out of which grew the plan for a boy's program which he outlined in "Scouting for Boys" and which is the basis of the British Boy Scouts' Association, which he founded. Lord Baden-Powell was in 1920 made Chief Scout of the World.

The Good Turn done by the Unknown English Scout to Mr. W. D. Boyce (see page 17) led Mr. Boyce, Edward S. Stewart and Stanley Willis, on February 8, 1910, to incorporate The Boy Scouts of America under the laws of the District of Columbia.

Believing that a Federal Incorporation would serve boys better, the following incorpators were named in House of Representatives Bill No. 24747:

Frank W. Gunsaulus, Charles H. Stoddard, Roy O. West, of Chicago; E. J. Spencer, Wm. H. Thompson of St. Louis; Wm. J. Starr, of Madison, Wis.; James Gordon, of Okolona, Miss.; John A. Brashear, of Allegheny, Pa.; John J. Lentz, Columbus, O.; and Colin H. Livingstone, Washington, D. C.

The following official quotation, from the U. S. House of Representatives Committee on Education report of that bill clearly states that the purpose of the Movement is to produce a civic enthusiasm for service in a nation that means to live at peace with all the world.

"The purpose of the Boy Scouts of America is just this: 'To inflame the civic temper,' to develop the virile virtues in a nation that means to live at peace with all the world."

But it is true:

"If you are going to do anything for the average man you have got to begin before he is a man. The chance of success lies in working with the boy, not the man."—Theodore Roosevelt.

"Save a man, you save one person; save a boy and you save a whole multiplication table."—John Wanamaker.

"The boys of the nation are full of enthusiasm and spirit, and only want their heads to be turned the right way to become good, useful citizens. * * * They want a hand to guide them at the crisis of their lives when they are at the crossroads where their futures branch off for good or for evil."—Lieutenant-General Baden-Powell.

"The purpose of the Boy Scouts of America is to utilize the boy's leisure time under competent and sympathetic leadership, to popularize a large number of outdoor games and occupations of various sorts in which each boy can have a full share, and to provide the incentive that will attract and hold the boys by means of a compact, well-organized national body. It is the purpose to supplement all existing educational advantages and not to replace any of them."

Early in the summer of 1910, a conference was held of the representatives of 34 different organizations interested in boys and out of that came a permanent organization. President Taft became Honorary President; Col. Theodore Roosevelt, Honorary Vice President and Chief Scout Citizen; Hon. Gifford Pinchot became Chief Scout Woodsman and Ernest Thompson Seton, Chief Scout. Daniel Carter Beard, Adj. Gen. Wm. Verbeck and Col. Peter S. Bomus were elected National Scout Commissioners.

The first Executive Board consisted of:

Colin H. Livingstone, Chairman

W. D. Boyce	Geo. D. Pratt	Seth S. Terry
W. D. Murray	Mortimer L. Schiff	Lucien T. Warner
Frank Presbrey	Lee F. Hanmer	E. M. Robinson
Daniel Carter Beard	Adj. Gen. Wm. Verbeck	
Ernest Thompson Seton	Col. Peter S. Bomus	

These men later selected the Chief Scout Executive James E. West who opened offices in the Fifth Avenue Building (200 Fifth Ave.) in New York City.

It was perfectly natural that Scouting should become an outstanding proponent of out-door life, with such men as Theodore Roosevelt, Gifford Pinchot, Dan Beard, and Ernest Thompson Seton among its officials. Its leadership also explains its activity in character building and good citizenship. The Board stood for those precise things.

They carried on creative work on literature, on standards, on organization, building the American Oath and Law. These documents were then submitted to the College Presidents of the Country for criticism, and Scouting was on its way.

On June 15, 1916, the U. S. Congress granted a Federal Charter.

The Handbook for Boys was published in 1910 and subsequently the editions and quantities were as follows:

	Copies
1910, Original edition.....	68,900
June 1911, Advance edition	4,500
Aug. 1911, 1st edition.....	40,000
Nov. 1911, 2nd edition....	60,000
Dec. 1911, Reprint 2nd edition	5,250
May 1912, 3rd printing....	25,500
July 1912, 4th printing....	26,000
Jan. 1913, 5th printing....	27,250
May 1913, 6th printing....	25,000
Oct. 1913, 7th printing....	25,000
Dec. 1913, 8th printing....	24,500
Feb. 1914, 9th printing....	25,500
Mar. 1914, 10th printing...	25,000
Oct. 1914, 11th printing...	50,000
Jan. 1915, 12th printing...	18,000
Mar. 1915, 3rd edition....100,000	
Apr. 1916, Reprint 3rd edition	15,000
June 1916, 14th printing...100,000	
Dec. 1916, 15th printing...100,000	
May 1917, 16th printing...100,000	
Dec. 1917, 17th printing...100,000	
May 1918, 18th printing...100,000	
Dec. 1918, 19th printing...100,000	
May 1919, 20th printing...100,000	
Dec. 1919, 21st printing...100,000	
June 1920, 22nd printing...100,000	
Jan. 1921, 23rd printing...100,000	
June 1921, 24th printing...100,000	
Feb. 1922, 25th printing...100,000	
Aug. 1922, 26th printing...100,000	
Apr. 1923, 27th printing...112,000	
Sept. 1923, 28th printing... 98,700	
Jan. 1924, 29th printing...111,398	
May 1924, 30th printing...105,373	
Jan. 1925, 31st printing...100,000	
May 1925, 32nd printing...100,000	
Aug. 1925, 33rd printing...100,000	

	Copies
May 1926, 34th printing...100,000	
July 1926, 35th printing...100,000	
Mar. 1927, 36th printing...100,000	
May 1927, 37th printing...100,000	
Nov. 1927, 1st printing Revised Edition 100,000	
Nov. 1927, 2nd printing....100,000	
Dec. 1927, 3rd printing....100,000	
Jan. 1928, 4th printing....100,000	
Jan. 1928, 5th printing....100,000	
Mar. 1928, 6th printing....100,000	
Nov. 1928, 7th printing....100,000	
Nov. 1928, 8th printing....100,000	
Apr. 1929, 9th printing....100,000	
Aug. 1929, 10th printing...100,000	
Jan. 1930, 11th printing...100,000	
Apr. 1930, 12th printing...100,000	
Dec. 1930, 13th printing...100,000	
Mar. 1931, 14th printing...100,000	
June 1931, 15th printing...100,000	
Apr. 1932, 16th printing...100,000	
Nov. 1932, 17th printing...100,000	
July 1933, 18th printing...100,000	
Dec. 1933, 19th printing...100,000	
Sept. 1934, 20th printing...107,128	
Mar. 1935, 21st printing...100,000	
Sept. 1935, 22nd printing...100,000	
Mar. 1936, 23rd printing...100,000	
Oct. 1936, 24th printing...100,000	
Dec. 1936, 25th printing...100,000	
Mar. 1937, 26th printing...100,000	
Sept. 1937, 27th printing...100,000	
Feb. 1938, 28th printing...100,000	
Apr. 1938, 29th printing...100,000	
Nov. 1938, 30th printing...200,000	
Oct. 1939, 31st printing...200,000	
May 1940, 32nd printing...200,000	
Dec. 1940, 33rd printing...400,000	

TOTAL 6,900,000

This printing consists of 400,000 copies in printings of 100,000 each. All text and contents are identical in entire 400,000 copies except that in some instances some advertisements appear in one or more printings.

A Few Interesting High Points

1910

Incorporated February 8th under the laws of District of Columbia by W. D. Boyce, and opened National Headquarters at International Y. M. C. A. office, 124 East 28th St., New York, N. Y. President Taft accepted office of Honorary President. Theodore Roosevelt, Honorary Vice-President and Chief Scout Citizen. Mr. Colin H. Livingstone elected President; Messrs. Mortimer L. Schiff, Milton A. McRae, Benjamin L. Dulaney, Vice-Presidents; Mr. George D. Pratt, Treasurer. Mr. Daniel Carter Beard, National Scout Commssioner, Ernest Thompson Seton, Chief Scout. Messrs. John Sherman Hoyt, Dr. Jeremiah W. Jenks, William D. Murray, Frank Presbrey and G. Barrett Rich, members of the Executive Board. A promotional meeting held June 21, with representatives of 34 National organizations. Mr. James E. West was appointed Executive Officer.

1911

National Council established at 200 Fifth Ave., January 2, 1911, by Mr. West with 7 employees. First Annual Meeting held at the White House, Washington, addressed by President Taft. First edition of the Handbook printed. Scout Oath, Law and Badge and fundamental policies adopted. Membership during year—Scouts and Scouters, 61,495.

1912

First National Civic Good Turn, promotion of safe and sane Fourth of July. Boys' Life became official magazine. Sea Scouting begun. Membership during year—Scouts and Scouters, 98,647.

1913

President Wilson became Honorary President. Magazine Scouting created. Membership Registration system adopted. Scouts gave service during Spring floods and at Suffrage Parade, Washington, D. C. and Fiftieth Anniversary of Battle of Gettysburg. Membership during year—Scouts and Scouters, 114,882. Net membership, December 31st, 34,944.

1914

Troop Committee plan created. Training Program for Scouters begun. First Hornaday Wild Life Conservation medals awarded. Membership during year—Scouts and Scouters, 148,227. Net membership, December 31st, 132,741.

1915

First Merit Badge Pamphlets, 57 subjects issued. Membership during year—Scouts and Scouters, 262,043. Net membership, December 31st, 182,303.

1916

Federal Charter granted by Congress, June 15, giving protection to name and insignia and authorizing Scout uniform. Membership during year—Scouts and Scouters, 344,290. Net membership, December 31st, 245,073.

1917

Full resources placed at service of Government, under slogan "Help Win the War." Within 24 hours entire Scout membership advised of action. Thousands came into the Movement to be of service to their country. Veteran Scout classification established. Membership during year—Scouts and Scouters, 498,167. Net membership, December 31st, 356,609.

1918

War service at its peak. Scouts sold $400,000,000 of Liberty Loans and $43,043,698 War Saving Stamps, located 20,758,660 Standing Walnut Trees, collected over 100 carloads of fruit pits for gas masks, conducted 12,000 war gardens and war farms throughout the country, distributed over 30,000,000 pieces of Government literature. Membership during year—Scouts and Scouters, 599,518. Net membership, December 31st, 420,006.

1919

First National Boy Scout Week inaugurated by proclamation of the President of the United States. First Annual Pilgrimage to grave of Theodore Roosevelt. Membership during year—Scouts and Scouters, 680,088. Net membership, December 31st, 462,781.

1920

First National Conference of Scout Executives. First World Scout Jamboree held in England in July. Boy Scouts from 32 countries were present, Boy Scouts of America represented by 301. First International Scout Leaders' Conference. Membership during year—Scouts and Scouters, 780,170. Net membership, December 31st, 503,726.

1921

First organized service at State Fairs begun at annual Eastern States Exposition at Springfield, Mass. Scouts served at the Knickerbocker Theatre disaster in Washington

and at floods in Pueblo, Colo., and San Antonio, Texas. Membership during year—Scouts and Scouters, 620,314. Net membership, December 31st, 530,203.

1922

Second International Scout Conference. Permanent International Committee appointed Second National Training Conference of Scout Executives. Membership during year—Scouts and Scouters, 744,009. Net membership, December 31st, 614,465.

1923

Achievement Scout classifications established. Laura Spelman Rockefeller Memorial grant to Boys' Life, Dr. James E. West, Editor-in-Chief. Lone Scouts of America merged with Boy Scouts of America. Membership during year—Scouts and Scouters, 812,444. Net membership, December 31st, 661,452.

1924

"Every Scout a Swimmer" campaign inaugurated. Third International Scout Conference. Second World Jamboree at Copenhagen, Denmark. Third National Training Conference of Scout Executives. Membership during year—Scouts and Scouters, 925,358. Net membership, December 31st, 696,420.

1925

James J. Storrow of Boston elected President of the Boy Scouts of America succeeding Colin H. Livingstone, who had served fifteen years. First National Training School for Scout Executives. First Harmon Foundation Awards. Scout Councils started in Philippines and Puerto Rico. Membership during year—Scouts and Scouters, 1,006,586. Net membership, December 31st, 756,857. Good Will Delegation sent from Boy Scouts of America to South American Scout Organizations.

1926

President James J. Storrow died and Milton A. McRae, Vice-President, elected to fill unexpired term. Walter W. Head became President in May. Lord Baden-Powell, Chief Scout of the World, attended Annual Meeting. Silver Buffalo Awards for Distinguished Service to Boyhood created. Four International Scout Conference at Kandersteg, Switzerland. Fourth National Training Conference. Membership during year—Scouts and Scouters, 1,073,025. Net membership, December 31st, 811,268.

1927

Scout Program ruralized by 12 new Agricultural Merit Badges. Eagle Palms first awarded. Revised Handbook for Boys printed. Class of Honorary Scout created. Membership during year—Scouts and Scouters, 1,169,143. Net membership, December 31st, 814,481.

1928

First fifty-two Harmon Foundation Awards made. Fifth National Training Conference. Membership during year—Scouts and Scouters, 1,183,105. Net membership, December 31st, 819,791.

1929

Third World Jamboree held at Arrowe Park, England and attended by 50,000 Scouts representing 73 different lands. Fifth International Scout Conference. Membership during year—Scouts and Scouters, 1,181,227. Net membership, December 31st, 842,540.

1930

Cub Program for younger boys formally adopted. White House Conference on Child Health and Protection called by President Hoover, Boy Scouts of America represented by Chief Scout Executive, who served as Chairman of Committee on Youth Outside the Home and School. Membership during the year, 1,247,493 Scouts and Scouters. Net membership, December 31st, 864,341 Scouts and Scouters.

1931

Sixth International Conference held near Vienna. Cub Program gaining. Membership during the year, 1,266,663. Membership on December 31st, Scouts and Scouters, Cubs and Cubbers, 878,358.

1932

Ten-Year Program adopted to insure that one in every four new male citizens should be a four-year Scout trained man. Mortimer L. Schiff Scout Reservation presented to Boy Scouts of America by Mrs. Jacob H. Schiff. Membership during year, Scouting and Cubbing, 1,260,504; grand total December 31st, 1932, 878,461. Grand total since 1910, 6,021,532 (includes some duplicates).

1933

Fourth World Jamboree held at Gödöllö, Hungary at which 21,000 Scouts from 46 lands participated. Membership during year, Scouting and Cubbing, 1,268,441, net membership, December 31, 1933, 904,240. Grand total since 1910, 6,389,551 (includes some duplicates).

1934

National Good Turn, in response to request from President Roosevelt's radio address, performed by Boy Scouts, involving collecting of clothing, household furnishings, foodstuffs and supplies for the needy. Extension of program of cooperation with Catholic churches. Membership during the year, Scouting and Cubbing, 1,004,266 (includes some duplicates). Grand total since 1910, 6,530,330.

1935

Silver Jubilee of Scouting. Five millionth copy of Handbook for Boys presented to President Roosevelt. First National Jamboree scheduled but cancelled because of epidemic. Senior Scouting formally authorized. Membership during the year, Scouting and Cubbing, 1,066,458. Grand total since 1910, 6,530,330.

1936

Year of preparation for National Jamboree. Sixth National Training Conference at French Lick, Indiana. Membership during the year, Scouting and Cubbing, 1,498,136; membership December 31, 1936, 1,069,156; grand total since 1910, 7,376,961.

1937

National Jamboree held at Washington, D. C., at invitation of the President, June 30th to July 9th, with attendance of 27,232 persons representing 536 Councils. Fifth World Jamboree at Vogelenzang, Holland. Ninth International Conference. Membership during the year, Scouting and Cubbing, 1,602,777; membership December 31, 1937, 1,129,827; grand total since 1910, 7,858,931.

1938

Boy Scouts participated in Rededication to Constitution program, sponsored by the National Rededication Committee. Senior Scout Citizenship Dedication developed. Philturn Rockymountain Scoutcamp presented by Waite Phillips. Membership during the year, Scouts and Scouters, 1,737,072. Net membership, December 31, 1938, 1,271,900. Grand Total since 1910, 8,411,949.

1939

Scouts participated in Golden Gate Exposition in San Francisco and World's Fair in New York, maintaining a Service Camp on the Fair grounds in New York, where 3,900 Scouts and Scouters took part in a unique service project lending assistance to the Fair in many ways. Scout Citizenship Dedication Ceremony held for groups of Scouts representing all those who became 21 years of age during the year. Tenth International Scout Conference held at Edinburgh, Scotland. Chief Scout Executive elected a member of the International Scout Committee. Seventh National Training Conference held. White House Conference on "Youth in a Democracy" called by President Roosevelt in which the Boy Scouts of America was represented by the Chief Scout Executive. Special experimental work with Scouting in Less-Chance areas carried on. Scout Alumni Plan promoted. Membership during the year, Scouting and Cubbing, 1,915,154. Net membership, December 31, 1939, 1,391,831. Grand total since 1910, 8,999,123.

1940

Boy Scouts served again at World's Fair in New York and at the Golden Gate Exposition in San Francisco. Boy Scout Program for helping in national emergency and Government defense program adopted — a Program of Action for Strengthening and Invigorating Democracy. Troop Inventory and Roll Call; Emergency Service Corps adopted, mobilization plans.

Distinguished Service to Boyhood

The Silver Buffalo is awarded by the Boy Scouts of America for Distinguished Service to Boyhood. Since it was first presented in 1926, the Awards have been made as follows:

1926: Lord Baden-Powell, the Unknown Scout, William D. Boyce, Colin H. Livingstone, James J. Storrow (posthumous award), Daniel Carter Beard, Ernest Thompson Seton, Edgar M. Robinson, Lee F. Hanmer, General George W. Wingate, Joseph Lee, Howard S. Braucher, Mortimer L. Schiff, Milton A. McRae, Frank Presbrey, George D. Pratt, John Sherman Hoyt, Dr. Jeremiah W. Jenks, William D. Murray, G. Barrett Rich, James E. West, George J. Fisher.

1927: Hubert S. Martin (Great Britain), Brother Barnabas, Stuart W. French, Walter W. Head, Bolton Smith, William Howard Taft, William Adams Welch.

1928: The Unknown Soldier, Col. Charles A. Lindbergh, Arthur N. Cotton, Maj. W. de Bonstetten, Clarence H. Howard, Charles D. Velie, William H. Cowles.

1929: Calvin Coolidge, Richard E. Byrd, Wilbert C. Longfellow, John H. Finley, Howard F. Gillette, Charles D. Hart, H.R.H. The Prince of Wales.

1930: Herbert Clark Hoover, James Earl Russell, Franklin D. Roosevelt, James Austin Wilder, Charles L. Sommers, Charles C. Moore, Lewis Warrington Baldwin.

1931: The Right Hon. Lord Hampton, D.S.O., Griffith Ogden Ellis, Lewis Gawtry, George Welch Olmsted, Victor F. Ridder, Robert P. Sniffen, Mell R. Wilkinson.

1932: Dwight Filley Davis, William Edwin Hall, Alfred W. Dater, Barron Collier, Frank A. Bean, Hermann W. Merkel.

1933: Honorable Vincent Massey, Martin H. Carmody, John P. Wallace, Cyrus Adler, Reginald H. Parsons, John A. McGregor.

1934: Newton D. Baker, Paul Percy Harris, John M. Phillips, Colonel Theodore Roosevelt, Charles E. Cotting, Frederic Kernochan, George Albert Smith.

1935: Booth Tarkington, Amos Alonzo Stagg, Daniel A. Tobin, Fielding Harris Yost, Calvin Derrick, R. Tait McKenzie.

1936: Major Frederick Russell Burnham, Dr. Hugh S. Cumming, Dr. Laurence Locke Doggert; Dr. Charles Horace Mayo, Dr. George Vincent and John Skinner Wilson.

1937: No awards.

1938: John A. Stiles, Thomas E. Wilson, William T. Hornaday, George E. Allen, Frank Cody, Frank G. Hoover, Cornelius McGillicuddy, Dr. C. B. Smith.

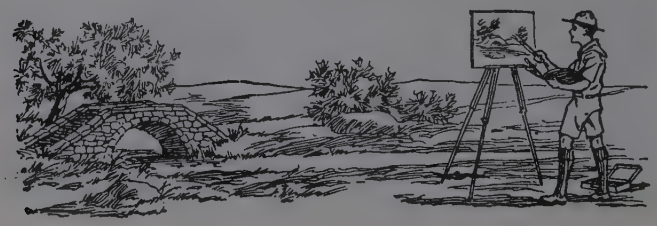
1939: Dr. William Chalmers Covert, Marshall Field, Elbert K. Fretwell, Heber J. Grant, Most Reverend Francis C. Kelley, John R. Mott, Norman Rockwell.

1940: Rev. Dr. Edward Roberts Moore, Rev. Dr. George W. Truett, E. D. Nims.

HONORARY SCOUTS

In 1927, the National Council created the title of Honorary Scout to be conferred upon American citizens of outstanding achievement in outdoor activity, exploration and worthwhile adventure. The Honorary Scouts are:

Roy Chapman Andrews, New York, N. Y.
Capt. Bob Bartlett, New York, N. Y.
Frederick Burnham, Los Angeles, Calif.
Admiral Richard E. Byrd, Boston, Mass.
George K. Cherrie, Newfane, Vt.
James L. Clark, New York, N. Y.
Merian Cooper, Los Angeles, Calif.
Lincoln Ellsworth, New York, N. Y.
Geo. Bird Grinnell, New York, N. Y.
Col. Charles A. Lindbergh, New York, N. Y.
Donald McMillan, Provincetown, Mass.
Clifford H. Pope, New York, N. Y.
George Palmer Putnam, New York, N. Y.
Kermit Roosevelt, New York, N. Y.
Carl Rungius Banff, Alberta, Can.
Stewart Edw. White, Burlingame, Calif.
Orville Wright, Dayton, Ohio



APPENDIX C

The Merit Badges

Agriculture

To obtain this Merit Badge, a Scout must:

1. Explain the nature of soil, its texture, its need of water, of air, and of plant and animal life; what the soil does for the plant and how the soil may be improved.
2. Make a seed tester and test the germination of three chosen varieties of seeds—100 seeds of each variety.
3. Identify and describe ten common weeds of the community and tell how best to eliminate them.
4. Identify six common insect pests, tell what plants they usually infest, and how best to control them.
5. Have a practical knowledge, for his locality, of plowing, cultivating, harrowing, disking, draining, and harvesting, and the purposes of each. Describe also the farm implements used in each case.
6. Tell how plants are propagated—by seeds, roots, cuttings, tubers, buds, and grafts. Explain where plants get their food and how they grow.
7. Read a weather map, know weather signals, and make local observations.
8. Name and distinguish ten common birds of his locality, and state their value to the farmer.

Angling

To obtain this Merit Badge, a Scout must:

1. Catch and identify at least one specimen from each of three local species of fish by the usual angling methods (fly-casting, bait-casting, trolling, and bait-fishing). At least one species must be taken by fly-casting or one by bait-casting.
2. Show proficiency and accuracy in fly-casting with the fly for distances of 30 or 40 feet, or in bait-casting for distances of 40, 60 and 70 feet.
3. Name and describe at least five standard fly patterns, or make a fly, spoon troll, plug or any other form of artificial bait lure and prove its worth by catching fish with it. Make a neat single-gut leader at least four feet long. Splice the broken joint of a rod or in some other way show proficiency in repairing broken tackle.
4. Give the open season for the game fishes in his vicinity, and explain how and why they are protected by the law.

Animal Industry

To obtain this Merit Badge, a Scout must:

1. Name three breeds of draft horse and two breeds of light horse, and give the country or origin of each.

2. Name and give relative merits of four leading breeds of dairy cattle.

3. Name and explain the color markings and characteristics of five different breeds of beef animal.

4. Tell the requirements for the successful and profitable production of beef on a farm.

5. Describe how hogs are made profitable.

6. Name four leading breeds of sheep and describe them.

7. Demonstrate one first aid requirement in connection with farm animals.

Archery

To obtain this Merit Badge, a Scout must:

1. Shoot with bow and arrows a Junior American Round—30 arrows at each 50, 40, and 30 yards—on a standard 48-inch target, and make a score of 250.

2. With a bow, arrow and string made by himself, shoot 125 yards, OR with a bow made by himself shoot 300 (under Requirement No. 1) for a Junior American Round.

3. (a) Give the definition of: York, American and Junior American Rounds: also Team Shoot for Men, Team Shoot for Boys. Know the requirements for entering a national or his local association tournament, and the events open to him.

(b) Explain the meaning of wand, clout, and flight shooting; roving.

(c) Explain the general rules for shooting in tournament, as to number of arrows used, how scored, and safety rules.

4. (a) Explain care of his bow, string and arrows.

(b) Splice a loop on the end of his bowstring; whip the string; and adjust the string with the bowman's knot.

(c) Name at least four woods commonly used for bows; three woods for arrows. Describe at least two common repairs for arrows.

(d) Explain: cast; follow the string; weight of bow; fistmele; spine; matched arrows; footed arrows; difference between flight, target and hunting arrows; backed bow; reflexed bow.

5. Know something of the history of Archery and the principal archers of the past and the present, and their achievements.

Architecture

To obtain this Merit Badge, a Scout must:

1. Present a satisfactory free-hand drawing.

2. Draw, without accurate measurements, the five orders of architecture, the drawings being of the character of sketches, but preserving the proportions.

3. Write an historical outline of the important periods of architectural development, giving the names of the important recognized architects identified with the development of each style.

4. Submit an original design for a two-story house, and tell what material is necessary for its construction, giving an outline of specifications, the design to consist of original working drawings at scale, drawn in ink on linen or paper suitable for making prints.

Art

To obtain this Merit Badge, a Scout must:

1. Make a free-hand pencil sketch of an animal or bird showing in values the distribution of color.

2. Draw a cylindrical object and a rectangular object grouped together a little below the eye, and show light and shade.

3. Make a drawing of some example of historic ornament.

4. Make an original decorative arrangement in color, using any motif, and state for what use the design is intended.

5. State the essentials of the reproductive processes of etching, half-tone engraving, color printing, and lithography.

6. Paint a flower-spray or leaf-spray in color.

7. Present a camp scene either in water color or oil.

Astronomy

To obtain this Merit Badge, a Scout must:

1. Describe the characteristics and differences of the celestial bodies including sun, moon, planets, comets, meteors, stars, nebulae, and galaxies.

2. Show that he has a clear understanding of the structure of the universe by describing: (a) the relative position of the earth in the solar system; (b) the relation of the solar system to the Milky Way galaxy; (c) the relation of the galaxy to other systems in the universe.

3. Explain the actual and apparent movements of the earth, moon, sun, and other planets.

4. Explain the causes of: (a) phases of the moon; (b) tides; (c) solar and lunar eclipses; (d) the seasons; (e) leap year.

5. Know the differences between the following kinds of time: (a) sidereal (star time); (b) solar; (c) apparent; (d) mean; (e) local; and (f) standard.

6. Identify in the sky: (a) at least 8 first magnitude stars; (b) 15 principal constellations, including at least 4 in the Zodiac. Be able to find the North by means of other stars than Polaris.

7. Explain the differences between a planet and a star. Explain the motions and characteristics by which each of the 5 naked-eye planets can be positively identified at any time it is visible.

8. Make from personal observation, a carefully drawn map (at least 8½" x 8½") of the north circum-polar region of the sky. Show the principal stars in at least five constellations.

9. Construct at least one of the following: (a) sundial; (b) star clock; (c) planisphere; (d) simple refracting telescope; (e) four-inch telescope mirror; (f) simple telescope mounting.

Athletics

To obtain this Merit Badge, a Scout must:

1. Write an acceptable article of not less than five hundred words on how to train for an athletic event.

2. Give the rules for two track and two field events, and define an amateur.

3. Prepare plans for the holding of an athletic meet, specifying duties of each required official.

4. Produce evidence of having satisfactorily served as an official in an athletic meet, or in a major athletic sport, such as football, baseball, or basketball.

5. Qualify in one event, according to his weight, in each of the following groups:

		Under 75 Lbs.	Under 95 Lbs.	Under 110 Lbs.	Under 125 Lbs.	Under 140 Lbs.
1.	Run. bd. jump...	10 ft. 2 in.	11 ft. 6 in.	12 ft.	13 ft.	14 ft.
	Run. high jump.	3 ft. 2 in.	3 ft. 6 in.	3 ft. 9 in.	4 ft.	4 ft. 3 in.
	St. bd. jump.....	5 ft. 10 in.	6 ft. 3 in.	6 ft. 9 in.	7 ft. 2 in.	7 ft. 4 in.
	St. high jump....	2 ft. 6 in.	3 ft.	3 ft. 2 in.	3 ft. 4 in.	3 ft. 6 in.

2.	50-yard dash.... 7 sec.	7 4-5 sec.	7 3-5 sec.	7 1-5 sec.	7 sec.
	100-yard dash.....			13 sec.	12 3-5 sec.
	6-potato race..... 36 sec.	28 sec.	27 sec.	26 sec.	25 sec.
3.	20-yard swim..... 19 3-5 sec.	18 2-5 sec.	17 4-5 sec.	17 1-5 sec.	16 3-5 sec.
	40-yard swim..... 47 sec.	40 sec.	39 sec.	38 sec.	37 sec.
4.	Pull-up..... 3 times	5 times	6 times	8 times	10 times
	8-lb. shot-put..... 15 ft.	20 ft.	24 ft.	28 ft.	32 ft.
	Push up fr. floor 7 times	9 times	10 times	12 times	14 times
	Rope cl. 18 ft..... 29 sec.	17 sec.	15 sec.	13 sec.	11 sec.
5.	Baseball throw for accuracy... 42 ft. (3 strikes, 6 throws)	48 ft.	51 ft.	54 ft.	57 ft.
	Baseball throw for distance.... 120 ft.	150 ft.	175 ft.	195 ft.	210 ft.
	Basketball goal shooting..... 5 in 8 (30 seconds)	5 in 8	6 in 9	7 in 10	8 in 11

		Under 160 Lbs.	Under 175 Lbs.	Under 200 Lbs.	Over 200 Lbs.
1.	Running broad jump.....	15 ft.	16 ft.	14 ft.	10 ft.
	Running high jump.....	4 ft. 2 in.	4 ft.	3 ft. 6 in.	3 ft.
	Standing broad jump.....	7 ft. 6 in.	7 ft. 4 in.	6 ft.	5 ft.
	Standing high jump.....	3 ft. 8 in.	3 ft. 5 in.	3 ft.	2 ft. 4 in.
2.	50-yard dash.....	6 3-5 sec.	7 sec.	7 3-5 sec.	8 2-5 sec.
	100-yard dash.....	12 2-5 sec.	12 4-5 sec.	14 sec.	15 3-5 sec.
	6-potato race.....	24 sec.	28 sec.	32 sec.	36 sec.
3.	20-yard swim.....	16 sec.	15 sec.	15 4-5 sec.	18 3-5 sec.
	40-yard swim.....	36 sec.	35 sec.	39 sec.	40 sec.

		Under 160 Lbs.	Under 175 Lbs.	Under 200 Lbs.	Over 200 Lbs.
4.	Pull up.....	12 times	10 times	6 times	4 times
	8-lb. shot-put.....	34 ft.	36 times	37 ft.	38 ft.
	Push up from floor.....	16 times	17 times	12 times	8 times
	Rope climb 18 ft.....	14 sec.	17 sec.	20 sec.	25 sec.
5.	1. Baseball throw for accuracy..... (3 strikes in 6 throws)	65 ft.	70 ft.	60 ft.	50 ft.
	2. Baseball throw for distance.....	220 ft.	230 ft.	200 ft.	175 ft.
	3. Basketball goal shooting (30 seconds).....	9 in 12	10 in 13	8 in 12	6 in 15

Automobiling

To obtain this Merit Badge a Scout must be of legal age to drive a car and meet all other legal requirements of his state and must:

1. Carefully examine and check conditions of the following safety features:

(a) Windshield wiper.

(b) Adjustment of rear view mirror.

(c) Headlights for all headlight switch positions. Reflector surfaces. Cleanliness of lenses and that bulbs are free from blackening.

(d) Elevation and focus of headlight beams.

(e) Tail and stop lights.

(f) Windshield and rear window visibility.

(g) "Play" in steering wheel.
(h) Adjustment of brakes.
(i) Tires.

2. (a) List ten important things in his local or state Motor Vehicle regulations.
(b) Give the necessary qualifications (including age) before a person can legally drive a car in his state.

3. Explain how the use of intoxicating liquor increases motor accidents, as, for example, in its effect on the driver's vision, judgment and coordination.

4. A driver on a dry road, with brakes in good condition, sees danger ahead. Tell how many feet he requires to stop his car going 20 miles an hour; 40 miles; 60 miles.

5. Visit a traffic court (or traffic session of court) or interview a highway traffic officer, and make a report on at least two accident cases. Tell from the evidence what driving and safety rules were violated, and how accidents could have been prevented.

6. (a) List at least six sound driving practices which make for safety and courtesy on the road.
(b) List at least four important characteristics of a good driver.
(c) Demonstrate hand signals, using both single hand position and three position systems; explain their meaning.

7. Explain:
(a) Purpose of clutch, gear shift, accelerator, choke, and brakes; describe briefly how each works.
(b) How to stop car on wet or icy road.
(c) What to do when end skids to right; to left.
(d) What to do when stop light on rear of car ahead blinks.

8. Change a tire.

9. (a) Start a motor; put car in gear; shift gears.
(b) Come smoothly to full stop from speed of 30 miles an hour.
(c) Make right and left turns from proper traffic lanes, giving proper signals at proper time.
(d) Park in a 20 foot space.
(e) Start a car after stopping on an up-grade (away from curb); park on an up-grade and on a down-grade. Show how to drive down a steep hill OR show how to get out of sand, mud or snow.
(f) Turn around in order to go in opposite direction between lines or markers 25 feet apart.

10. Show ability to stop a car going at a speed of 20 miles per hour so that nose of car fits into a chalk marked U-

shaped box 5 feet wide. Bumpers should be over front line of the box and tires inside of side lines.

Aviation

To obtain this Merit Badge, a Scout must:

1. Know (a) the basic theory of flight; (b) the principle upon which lighter-than-air aircraft operate.

2. Make rough sketches or diagrams to show that he can distinguish between an airplane, a seaplane, an amphibian, a flying boat, an autogiro, and a helicopter.

3. Construct at least two different successful flying models from the types listed in Requirement No. 2.

4. Name three types of aircraft engines and explain the advantages of each. Know the construction of each and how each operates.

Basketry

To obtain this Merit Badge, a Scout must:

1. Plan and weave a large reed or raffia basket or tray.

2. Weave a cane seat for a stool, or a rush seat for a chair, or cane a chair.

Bee Keeping

To obtain this Merit Badge, a Scout must:

1. Examine a colony of bees, remove the combs, find the queen, and determine the amount of the brood, number of queen cells, and the amount of honey in the hive.

2. Distinguish between the drones, workers, eggs, larvae, pupae, honey, wax, pollen and propolis; tell how the bees make the honey, and where the wax comes from; and explain the part played in the life of the colony by the queen, the drones and the workers.

3. Have had experience in hiving or artificially dividing at least one swarm. Explain the construction of the modern hive, especially in regard to the "Bee spaces."

4. Put foundations in sections and fill supers with sections; and also remove filled supers from the hive and prepare the honey for market.

5. Write an acceptable article of not more than two hundred words on the differences in honeys according to the flowers from which the nectar is obtained.

OR

Comply with the 4H Club or Home Project Requirements in Bee Keeping as follows:

1. Own a hive of bees.

2. Do all work in care and management of the hive of bees.

3. Keep accurate cost account record of Bee Keeping during the season or year.

4. Exhibit honey samples as required by leaders in charge of 4H Club work.

5. Make complete report at the end of season or year as required by leaders showing profit or loss.

Beef Production

To obtain this Merit Badge, a Scout must:

1. Visit county, or state fair, or agricultural school and, from stock observed, name four beef breeds and show or explain markings and other characteristics for which each breed is noted.

2. Interview three farmers raising beef cattle, and state information received for fattening a pen of 2-year-old beef cattle after taking them from green pasture.

3. Explain fully what is meant by *Baby Beef* production.

4. Show a cost accounting record of beef cattle covering a ten month's feeding program.

5. After visiting a stock show, or state experimental farm describe your favorite breed of beef cattle. Give reasons.

6. Make a barn yard plan for proper handling of 60 head of beef cattle through the winter. Explain what parts of that plan are worked out on your own or another beef farm.

7. Tell the origin and history of one breed of beef cattle from their wild state to the present.

OR

Comply with the 4H Club work or Home Project Requirements in Beef Production, as follows:

1. Own a beef animal.

2. Do all the work in its care and management.

3. Keep accurate cost account records.

4. Exhibit animal as required by state and county leaders in charge.

5. Make complete report at end of season or year as required by leaders.

Bird Study

To obtain this Merit Badge, a Scout must:

1. Produce a list of forty species of wild birds which have been personally observed and positively identified in the field and tell how to differentiate each from those other species with which it might be confused.

2. Produce a list showing the greatest number of species that he has seen in the field in one week.

3. Produce a list derived from personal reading of:

(a) Twenty species of birds particularly noted for their value to agriculture in the destruction of insects and weed seeds.

(b) Ten birds of prey particularly useful in the destruction of rats and mice.

(c) Ten species of fish-eating birds, and tell why they are not inimical to man's interests.

4. Describe at least two bird boxes and two food tables that have been erected by him, the species of birds that have been attracted by them, and how many of the birds have nested in these boxes.

5. From personal observation name and describe the birds he has seen in three different habitats (open fields, woodlands, farmland, marsh, etc.) and tell why all birds do not choose the same habitat. Make at least three visits to each type of countryside.

or

Make a census of the bird-life of a 25-acre tract by systematically covering the ground on three separate days and listing the species and number of individuals of each observed.

6. State what he did to protect birds from slaughter; and to promote the creation of bird preserves and sanctuaries.

(BIRD STUDY IN HAWAII)

Since it is impossible for Scouts on the Hawaiian Islands to meet the requirements in Bird Study, as the required number of birds is not to be found on the Islands, these requirements are official for use in the *Hawaiian Islands only, but in no other section.*

1. Ascertain the approximate number of species of wild birds that occur in the Hawaiian group, and name and describe not less than seven species that have been personally observed by him, giving the English and Hawaiian name of each, and tell something of the home life (or habits) of each species of the seven.

2. Produce a list of all introduced species of birds found in the Islands and tell something of interest about each.

3. Name all species common to the Island where the Scout resides that are beneficial or detrimental to agriculture, giving reasons in each case.

4. Produce a list, from general reading, of ten birds of prey, from any country, that feed on rats and mice; ten that feed largely on fish; ten that feed on both animal and plant food.

5. State what is done by the Territory in the way of bird protection, and tell about the location, extent and purpose of the Hawaiian Island Bird Reservation.

6. State the reason for not building bird boxes in Hawaii. Tell why Scouts on mainland are encouraged to build bird boxes, food tables, etc, for the use of birds.

7. Name and briefly describe several birds from reading or from a visit to the museum, that are very rare or extinct. How many birds in the Hawaiian group are found in no other locality in the world; how many extinct species are known to have lived in Oahu?

Blacksmithing

To obtain this Merit Badge, a Scout must:

1. Make an open link of ⅜-inch stock.

2. Forge a chain hook out of ¾ x ½-inch soft steel, or ¾-inch round iron.

3. Make a bolt of ½-inch stock.

4. Bend and weld three links and form them into a chain, these links to be fastened to the hook of Requirement 2 by a ring, and links and ring to be made out of ⅜-inch round iron.

5. Make a straight cap weld of ¼ x 1-inch stock.

6. Make a cold chisel out of ⅝-inch hexagonal tool steel.

7. Temper a rock drill.

8. Explain how to harden and temper a cold chisel.

Bookbinding

To obtain this Merit Badge, a Scout must:

1. Rebind a book or a volume of a magazine, using book binder's board and book cloth.

2. Make a scrap book using book binder's board and book cloth or a worthy substitute.

Botany * *

To obtain this Merit Badge, a Scout must:

1. Make five field trips of at least two hours each, to observe wild plant life. Keep record based on field notes, of varieties of flowers found, with date, place, nature of locality, (swamp, roadside, woods, meadow, etc.) and other observations such as seeds, seed pods, leaf arrangements, insect attraction. (if photographs or sketches are included, record will be more interesting.)

2. Identify from living specimens at least 50 plant specimens.

3. Identify in three or more specimens all parts of a perfect and complete flower. Explain (a) how plants are pollenized; (b) how ferns differ from flowering plants.

4. Identify specimens of at least ten families of flowering plants, (other than trees), or submit properly labeled specimens of such families. (May be included as part of 8 B).

5. Know what plants are rare in his vicinity and what is being done or should be done to protect them.

6. Explain how plants use light, heat, water, oxygen, and carbon dioxide; how they manufacture they own food.

7. Submit or identify in field one specimen each of fungi, algae, lichens, and mosses. (Scouts living in regions where this requirement is not possible, may substitute five different species of ferns or desert plants.)

8. Carry out one of the following projects:

(a) Submit a seed collection, properly labeled, of at least 20 different kinds of seeds gathered by himself; germinate at least five species; find out all he can about different varities of seeds and how they are scattered.

(b) Submit specimens of at least 30 species of flowering plants. Include leaf, stem, flower and root (if not of rare plant.) Mount neatly, label both with common and scientific name, date, place found, nature of locality.

(c) Make a study of plant life in an area of not less than 15 square feet for at least two months. Keep record of species found, type of locality, insect attraction, seeds, etc.

(d) Raise a wild flower or fern garden, including at least 5 different species of plants. Know (a) both common and scientific names of each, (b) proper methods of transplanting and care.

* * Requirements effective January 1, 1942. Optional in 1941.

Bugling

To obtain this Merit Badge, a Scout must:

1. Sound properly on the bugle the following calls: First Call, The Scout's Call, Reveille, Mess, To the Colors, Officers, Drill, Assembly, Recall, Fatigue, Church, Fire, Swimming, Retreat, Call to Quarters, Taps.

Business

To obtain this Merit Badge, a Scout must:

1. Write a satisfactory business and a personal letter.

2. Know simple bookkeeping or shorthand and typewriting.

3. Make a budget of his expenses, including clothes and incidentals, and keep a complete and actual account of personal receipts and expenditures for six months.

4. Be prepared to answer questions and problems in interest, percentage and discount.

5. Present the certificate of his employers that for the period of six months preceding he has put into practice the Scout Oath and Law and shown efficiency in his application to business; that he has been prompt and regular in his attendance, and has shown due regard for his general appearance by keeping his hair combed, his hands, nails and teeth clean, his shoes shined, and his clothes clean and orderly; or, one year of successful service as Scout Scribe of a Troop, under the same conditions.

Camping

To obtain this Merit Badge, a Scout must:

1. (a) Have camped out fifty days and nights, sleeping under canvas, or under approved camp shelter, or in the open—including ten nights on hikes, during which ten nights he has set up or improvised his own shelter and cooked his own food, and

(b) Submit evidence that this camping was done under conditions in harmony with the minimum requirements of the National Camping and Activities Service.

2. Demonstrate how to put up and ditch a tent and arrange for overnight shelter in all weathers.

3. While on a hike or camp make a camp bed *on the ground,* using native materials gathered near-by, and *sleep on bed at least one night.*

4. Make a fire by rubbing sticks, using in so far as possible, native materials which he has gathered on hikes or in camp, *OR*

Make a fire with flint and steel, using for tinder, native material which he has personally gathered.

5. (a) Describe a camp-site which he has selected for a Patrol or Troop Camp, and give satisfactory reasons for his choice, and

(b) Draw a ground plan for lay-out of such camp, including location of spring or drinking water supply. Describe in writing (with illustrations) construction of a sanitary latrine and suitable means of disposal of garbage and refuse.

6. Construct a raft which will carry two people and their duffle safely, and demonstrate his ability to make practical use of it, *OR* either of the two following alternatives as determined by the local Committee on Advancement:

(a) Construct a model raft about 18 x 36 inches in size, to be fastened together with cord, bark, vines, etc.; no metal fasteners to be used. Describe the dimensions and kind of material required for the raft of which this is a model.

(b) Demonstrate ability to throw a diamond hitch and some other packing hitches, and properly pack camp equipment and supplies on a pack animal or dummy.

7. (a) Present himself for insection correctly clothed and equipped for a three-day camp, and

(b) Demonstrate his ability to pack properly against wet weather and transport this equipment on his back, and

(c) Submit a satisfactory menu and list of provisions for a three-day camp.

8. Tell what precautions should be taken on a Patrol or Troop hike or camp; (a) during the swimming period, (b) in the use of boats or canoes.

Canoeing

To obtain this Merit Badge, a Scout must first have passed the Merit Badge tests for Swimming and must:

1. Make a kneeling pad and use it throughout paddling tests. Discuss the advantages of the kneeling position.

2. In deep water and without losing contact with the canoe, jump out and climb in again without shipping water.

3. Accompanied by the examining Counselor who will paddle in the stern:

(a) Launch and board a canoe properly from pier or shore (from both, if possible.)

(b) With single paddle, over at least a 100-yard course and return, show proper form in executing the following strokes in bow position:

1. Bow stroke
2. Diagonal draw
3. Back water
4. Reverse sweep
5. ¼ sweep stroke turning canoe toward shore
6. Bow rudder
7. Cross bow rudder

Change paddle to other side and repeat above tests.

(c) Make proper landing.

4. Alone in a canoe, using double paddle (without drip cups) paddle a straight course for one quarter mile; make a right turn and return to vicinity of start; stop; execute a left pivot turn; and make proper landing.

5. Alone in a canoe, using single paddle while paddling out over a 200-yard course and returning, demonstrate two kneeling positions for one man cruising and correctly execute the following on one side going out and on the other side coming back:

(a) J. stroke
(b) Full sweep
(c) Outside pivot turn
(d) Draw stroke
(e) Push over
(f) Sculling stroke

6. Fully dressed—

(Wearing clothing usually worn in canoeing in his territory according to season of year):

(a) Capsize canoe in deep water about 50 yards from landing place.

(b) Right it and stow paddle and kneeling pad. Get in and paddle with hands or with paddle for 25 yards.

(c) Disrobe, secure clothing to thwarts, go overboard, and, holding with one hand, swim and tow swamped canoe to shore.

(d) Properly land emptied canoe and put it away (with assistance, if necessary).

7. A companion has capsized his canoe off shore and is clinging to it quietly. Come alongside in another canoe, and while safeguarding companion, empty swamped canoe by

drawing it upside down across the gunwales of rescue canoe, then launch and steady it while companion climbs aboard.

8. (a) Discuss contents of your favorite emergency canoe repair kit and explain how to use it in repairing a one-inch hole through canvas and planking.

(b) Explain emergency method of repairing a paddle shaft broken 3 inches above the blade.

(c) Discuss the proper length for a bow line (painter), how to place it correctly and its various uses. Show how to use it with another piece of line in making a bridle for towing.

9. Discuss wood, lengths, shape, and parts of both single and double-bladed paddles.

Carpentry

To obtain this Merit Badge, a Scout must:

1. Demonstrate the use of the rule, square, level, plumb-line, mitre, chalk-line and bevel.

2. Demonstrate the proper way to drive, set, and clinch a nail, draw a spike with a claw-hammer, and to join two pieces of wood with screws.

3. Show correct use of the cross-cut saw and of the rip-saw.

4. Show how to plane the edge, end and the broad surface of a board.

5. Demonstrate how to lay shingles.

6. Make a simple article of furniture for practical use in the home or on the home grounds, finished in a workmanlike manner, all work to be done without assistance.

Cement Work

To obtain this Merit Badge, a Scout must:

1. Design and mould in a form a concrete window-box or flower-pot, a garden jar, a garden seat, sundial, or hitching post.

2. Design and "build up" a cylindrical flower-pot, garden vase, or pedestal employing the process of turning or sweeping the form.

Chemistry

To obtain this Merit Badge, a Scout must:

Submit evidence of study and experimentation in Chemistry and demonstrate his ability to apply the knowledge gained in discussing points outlined in Part I, and carry out the experiments suggested in Part II.

PART I

1. In building a fire one whittles or breaks sticks into small splints, starts the fire with a match, flint and steel, friction, or burning glass, and aids it with gentle fanning. Gentle fanning will aid, but violent fanning will extinguish a small flame. Very dry wood gives a hot fire; green or moderately wet wood will burn but give out little heat, while very wet wood will not burn. Discuss each point.

2. Suppose one has three very large bell jars or bottles inverted over a trough of lime water, thus inclosing air and sealing so that air can neither escape nor enter. Suppose one puts a boy into one, a lighted candle the size of the boy into the second, and a piece of phosphorus the size of the boy in the third. Soon the water will begin to rise in each. When the water has replaced 11% of the air in the first, the boy will collapse; when 6% of the air in the second is replaced the candle will cease to burn; and when 21% of the air is replaced in the third no more change will take place. Fully interpret and explain.

3. Give (a) a list of the sources of water
(b) a list of the uses of water
(c) a list of the impurities found in water
(d) a classification, with respect to injurious nature, of the impurities.
(e) the special problems confronted in obtaining, treating and storing water for drinking purposes.

4. A good Scout keeps his knife, axe and iron cooking utensils clean and dry, and as far as possible equips himself with aluminum canteens, etc. Explain.

5. Every boy uses salt in seasoning his food. Assume he has a salt mine and the whole world is dependent upon his mine and upon his knowledge of what might be done with it. Give a full discussion of what he might produce, provided all other chemicals and our present-day chemical machinery were available.

PART II

6. Prepare and collect two of the following gases:
Oxygen, hydrogen, chlorine and ammonia.

7. Find out which, if any, of five substances given him are carbonates, sulphides or chlorides.

8. Find out which, if any, of several liquids or solutions given him are acids or bases.

9. Extract metallic copper from its black oxide.

10. Give two experimental demonstrations that some substances catalyze certain reactions.

Citrus Fruit Culture

To obtain this Merit Badge, a Scout must:

1. Name three different kinds of citrus fruit, and two varieties of each kind.

2. Tell what points should be taken into account in selecting a site for a citrus orchard. Select a site favorable for each purpose; tell why it is suitable.

3. Name three diseases of citrus fruit, and give directions for the control of each.

4. Name the serious citrus insect pests in his region; give directions for their control.

5. Prune a citrus tree properly and give the reasons for each step.

6. Spend a half day in a citrus grove. Study the trees, their condition as to vigor, cultural practices and crop prospects, then write a report of his observations.

7. Tell the difference between a seedling tree and a budded tree; which is used in planting citrus orchards and why?

8. Tell what time of the year citrus trees are budded in the nursery; the different kinds of root stock that are used in propagating citrus trees; what one or ones are preferred for his section and why.

9. Bud a seedling stock; then demonstrate and describe briefly the details as he has performed them.

10. Describe in considerable detail the operation of picking and grading of fruit in a citrus orchard. Tell what points require special care.

11.a Describe a packing house in which citrus fruit is prepared for shipping. Trace the course of the fruit from the time it enters the packing house until it is packed in the car for shipment.

b. Make a written report on some of the practices he has observed in a citrus orchard or in a packing house, which seem to him to be faulty; state how these practices could, in his judgment, be improved and the results which would follow the adoption of the changes he suggests.

12. On a map of the United States, block in the states or section of states in which various citrus fruits are now successfully grown such as grapefruit, oranges, limes and lemons.

OR

Comply with the 4H Club or Home Project requirements in the planting and management of citrus fruit trees as follows:

1. Own the number of trees required in the project.

2. Do all the work in the care and management of trees for one year.

3. Keep accurate record of costs, observations, results.

4. Exhibit products of citrus work as required by his county leader in charge.

5. Make a complete report at the end of season or year as required by leaders.

Civics

To obtain this Merit Badge a Scout must in addition to meeting the following requirements, be familiar with the Declaration of Independence, the Constitution of the United States, and have a working knowledge of the structure of his federal, state and local Government.

1. (a) Tell which department of his local government has jurisdiction in each of the following instances—automobile accident, mad dog scare, permit to hold a political meeting in a public building, building permit, dog license, contagious disease, garbage disposal.

(b) Learn by visiting one of these departments and talking with some of those responsible for its management, how it operates. Tell where the money comes from to run the department and what it costs the average family in the community per year.

2. (a) Present a simple scrapbook of clippings from newspapers or other current literature, setting forth some local, county, state, or national civic problem, if possible showing both sides of the question. Explain how he thinks it can best be solved, or list the principal arguments on both sides, OR

(b) List the various departments of his local government such as fire, police, health, department of education, etc., with the amount of tax money spent during the last year for the work of each. List departments in the order of amounts spent.

3. List at least two important civic regulations, which apply to him or his family, with regard to each of the following: highway safety, property rights, fire hazards, sanitation, and special permits such as hunting and fishing.

4. Attend a political meeting, meeting of a city or town council, a session of court, or other public civic meeting, and make a full report of his observations.

5. Take active part in at least one co-operative civic enterprise, such as: Checking a local precinct for complete list of voting registration or for accuracy of registration;

get-out-the-vote campaign; clean-up week; anti-noise campaign; improving the appearance or usefulness of a vacant lot; collecting magazines and books regularly and taking them to hospital, old peoples' home or similar institution; cleaning up some spot of historic interest: control of insect pests.

6. Select someone who has figured prominently in the history of his community or in the history of our country and from incidents in his life show why he deserves the title "a good citizen."

7. Select four types of foreign government and tell how each differs from that of the United States.

Coin Collecting

To obtain this Merit Badge, a Scout must:

1. Own and exhibit at least 100 types of coins personally collected by him, and mounted for display, including coins from at least 15 different countries, properly classified as to country, ruler (if any), denomination, date and any special reason for issuing. This collection shall also include 5 coins made of each of the following materials, properly noted as part of the classification data — silver, nickel, copper, and two other alloys.

2. Give a brief, interesting history of:

(a) The origin of the American dollar; the derivation of its name;

(b) U. S. coins since the first ones issued, giving all the denominations of U. S. coins issued for circulation and the metals used in each.

3. Explain fully what is meant by the following terms, illustrating with examples from his own collection wherever possible: Pine Tree Shilling; Trade Dollar; Colonial Coins; Hard Times Tokens or Jackson Cents; Commemorative Issue; Necessity Money of the United States; Flying Eagle Cent; Fractional Currency.

4. Explain the following terms, illustrating with examples from his own collection wherever possible: AU; AR; AE; Bust; Exerque; Flan; Head; Incuse; Inscription or Legend; Obverse; Overstrike; Counterfeit; Counterstamp; Reeded Edge; Lettered Edge; Reverse; Struck Coin; Cast Coin.

5. Describe the condition of coins classified in the following ways: proof; uncirculated; fine; good; poor. Explain how the value of a coin is determined.

6. Classify as to country, denomination and material, five coins furnished by his Counselor.

7. Tell the purpose of mint marks on a coin. Name three

U. S. mints and show a coin from each mint from his own collection.

Conservation * *

To obtain this Merit Badge, a Scout must:

1. Identify as a result of his own observation on field trips at least five different species each of at least four of the following forms of wild life: trees, shrubs, plants, birds, fish, and mammals.

2. Find out what protection is given by law to at least one of each of these forms of wild life. Know which forms, if any, are in danger of extinction in his locality if further protection is not provided.

3. Prove practical knowledge of conservation problems as follows:

(a) Know at least three varieties each, of trees, shrubs, and plants which supply food for wild life. Base findings on personal observation, noting at feeding stations and elsewhere what food attracts the most birds and animals and the widest variety of each. Note particularly problems of winter food supply and suggest what can be done to increase this in his locality.

(b) Explain (1) what food supply is needed to sustain a fish population in a local stream or pond: (2) what measures can be taken to prevent or eliminate pollution dangerous to wild life.

(c) Explain the general causes of soil erosion and suggest at least four practical ways to prevent it.

(d) Submit at least two photographs taken by himself, or (if no camera is available) submit six or more illustrations from current publications, showing phases of conservation of wild life or soil.

4. Carry out one of the following projects:

(a) Maintain a bird or animal feeding station for at least four winter months, and keep record of wild life taking advantage of food provided.

OR

(b) Maintain or assist in maintaining a bird sanctuary for at least four months. Keep record of birds seen in sanctuary, both permanent and transient, noting favorite food and favorite type of nest or bird house.

OR

(c) Take necessary soil erosion measures on a roadside bank or garden or orchard; or reclaim a worn-out lawn.

5. Carry out one of the following projects, in cooperation with proper authorities:

* * Requirements effective January 1, 1942. Optional in 1941.

(a) Plant and care for at least twenty young trees or seedlings (other than fruit trees) for a season.

OR

(b) Stock a pond or stream with fish; or improve habitat by building rock dam or crib.

OR

(c) Hatch a brood of pheasant or quail eggs and release young birds in suitable cover.

OR

(d) Serve actively in an approved community conservation project. (This may include service in authorized patrols of parks or other public reservation in the interests of fire prevention, and preservation of wild life.)

Cooking

To obtain this Merit Badge a Scout must:

Build a fireplace out of stone, brick, clay, logs, or other locally gathered material.

(b) Build a fire in the fireplace.

(c) Give evidence satisfactory to the Counselor that he has cooked over this fire a satisfactory meal for at least four persons, including hot soup, meat or fish, two fresh vegetables, a dessert which requires cooking, and a hot beverage, timing his cooking so that the courses will be ready to serve at the proper time.

(d) Order and pack properly for transportation the necessary materials to make this meal.

2. Mix dough and bake biscuits or other bread for four or more persons outdoors in a reflector oven, clay or dutch oven, or other improvised outdoor oven.

3. Give evidence that he has carved properly and served correctly to a Patrol or family group at table.

Corn Farming

To obtain this Merit Badge, a Scout must meet any seven of the following requirements:

1. Give the life history and development of corn from zea maize to the present varieties.

2. Visit a county or state fair and name the different breeds and varieties of field corn shown at the corn exhibits.

3. Attend a state or county fair and name the breed or

strain of four leading prize winning varieties of seed corn on exhibit.

4. Make an exhibit ot one ear of each kind of field corn, sweet corn, and popcorn, grown in his county and be able to name the varieties represented.

5. Explain fully how corn pops and the necessary storage requirements for popcorn.

6. Demonstrate how to test corn for vitality.

7. Demonstrate how to string seed corn for drying purposes.

8. Demonstrate how to make or show an exhibit of a sawdust box test.

9. Determine how many hills of corn there are to an acre if the hills are planted 3½ feet apart each way.

10. Explain the meaning of the following as applied to corn:

1—Vitality Test
2—Market Grade
3—Moisture Test
4—Average Stand
5—Check Row

11. Explain how corn is pollinated.

OR

Comply with the 4H Club or Home Project Requirements in Corn Farming as follows:

1. Own one acre of clean crop.

2. Do all work in care and management for season.

3. Keep accurate cost account and records as required by leader.

4. Exhibit corn samples as required by county or state leaders in charge.

5. Make complete report at end of season or year as required by leaders.

Cotton Farming

To obtain this Merit Badge, a Scout must:

1. On a map of the United States block in the sections where cotton is successfully grown.

2. Grow a patch of cotton successfully on the basis of instructions given by the County Agent representing the United States Department of Agriculture and his State College of Agriculture.

3. Demonstrate how to test cotton seed for vitality.

4. Give the domestic and commercial uses of cotton and cotton seed; name some of the more important by-products.

5. Name the more important insect pests that damage

cotton, and give recommendations as to prevention and control of same.

6. Name the important cotton plant diseases and explain fully control measures for each.

7. By arrangement with the owner of a cotton plantation, take part in four operations in connection with a cotton crop and explain fully how he did the work.

8. Make a written report from personnal observation on a cotton gin in action and on the conditions and operations of the nearest local cotton market.

9. Demonstrate how he would detect cotton goods made from long staple cotton.

10. Draw a plan for a moderate sized cotton plantation, showing field layouts and plan for 3 or 4 years rotation of crops with the cotton.

OR

Comply with the 4-H Club or Home Project requirements in Cotton Farming as follows:

1. Own a plot of cotton and do the work as required by state and county leaders.

2. Do all the work in its care and management.

3. Keep accurate record of costs and results.

4. Exhibit products as required by state and county leaders in charge.

5. Make a complete report at the end of season or year, as required by leaders.

Cycling

To obtain this Merit Badge, a Scout must:

1. Ride 25 consecutive miles on each of two days each month for a period of three months; in other words, six rides of 25 miles each during the three months. He shall submit to the Merit Badge Counselor a report of the rides taken, including dates, routes traveled and interesting things observed.

2. After the three-month conditioning period in Requirement No. 1, ride a bicycle 50 miles in ten hours.

3. Repair a puncture.

4. Take apart and clean a bicycle and put it together again properly.

5. Know and demonstrate safety precautions on the road.

6. Go on a scouting expedition over a route selected by the Merit Badge Counselor, and make a report; also report correctly verbal messages in connection with this expedition.

7. Read and follow a course laid out on a map.

(*Note*) Bicycle must be equipped with all necessary safety features as required by his state and local traffic laws.

Dairying

To obtain this Merit Badge, a Scout must:

1. Understand the management of dairy cattle.

2. Be able to milk.

3. Understand pasteurization of milk, and care of dairy utensils and appliances.

4. Test at least five cows for ten days each, with the Babcock test, and make proper reports.

OR

Comply with the 4H Club or Home Project Requirements in Dairying as follows:

1. Own a cow or calf.

2. Do all the work in its care and management.

3. Keep accurate cost account records.

4. Exhibit animal as required by state and county leaders in charge.

5. Make complete report at the end of season or year as required by leaders.

Dog Care

To obtain this Merit Badge, a Scout must:

1. Own and give proper care to a dog for a period of not less than six months; *or* have responsibility for the care of his family's dog for not less than six months.

2. Present a record showing the care he has given to his dog during a period of six months, including such items as feeding hours, and kinds of food; housing; training; exercise; grooming and bathing; care for the dog's habits and health, including precautions to keep dog in good condition.

3. Report the approximate cost of feeding and caring for his dog for a six months' period.

4. Point out on his dog at least ten parts, giving the technical name for each part.

5. Describe from personal observation or point out from pictures, three distinguishing breed characteristics of 15 breeds of dogs; *or* give a brief history of some one breed of dog, including: the origin (if possible); any cross-breeding that has taken place; characteristics that have been gained by cross-breeding; great champions of the breed; persons who have been instrumental in furthering the breed.

6. Explain the symptoms and first aid treatment for at least one illness and one accident common to dogs.

7. Explain proper methods of training dogs to do the following:

(a) Obey simple instructions such as "come here," "stop barking," "lie down," etc.; (b) Walk to heel; (c) Carry and retrieve objects; (d) Herd cattle or sheep; (e) One or more tricks such as "speaking," "begging," "dead dog," etc.

8. Know the state and county laws and town or municipal ordinances (if any) involving dogs, including ownership, control and humane treatment.

Dramatics

To obtain this Merit Badge, a Scout must: 1. Show that he is familiar with the outstanding periods in the History of the Drama, beginning with the Greek Drama.

2. Submit evidence that he has taken part in a play given by his Troop, school, Sunday school, or other group, before an audience of at least fifty persons, such part to be of sufficient importance to give him opportunity to display dramatic ability.

3. Submit a satisfactory play written by himself, of at least two acts and of at least twenty minutes duration preferably on a subject connected with Scouting; submit a diagram of a stage, set for one of the acts in such play, indicating left, right, off stage, back drop, proscenium, etc.

4. Through an oral quiz, using his own play (Requirement No. 3) to illustrate, exhibit a knowledge of the fundamental elements of a play, namely, plot, character, dialogue; point out some of the elements that enter into the development of the plot, such as conflict, surprise, rising action, climax, etc.; show how characters reveal themselves by words and actions, and why the dialogue should be natural and brief, and accompanied by action.

5. Direct a play of at least twenty minutes duration given by his Troop or other group, selecting the cast and planning or actually supervising the scenery, properties, costumes, lighting and all other details with reference to the actors and materials available. (This may be his own play in Requirement No. 3.) Arrange to have the Counselor, or someone designated by the Counselor, present at the performance.

6. "Make up" as an old man, an Indian, and "straight."

7. Present to the Counselor a list of five entertainment features which he can arrange to give at a moment's notice,

either alone or with others, suitable for camp fire, Troop meeting or general gathering, and present any two selected by the Counselor from such list.

Electricity

To obtain this Merit Badge, a Scout must:

1. Illustrate the experiment by which the laws of electrical attraction and repulsion are shown.

2. Understand the difference between a direct and an alternating current, and show uses to which each is adapted. Give a method of determining which kind flows in a given circuit.

3. Make a simple electro-magnet.

4. Have an elementary knowledge of the construction of simple battery cells, and of the working of electric bells and telephones.

5. Be able to replace fuses and properly to splice, solder, and tape rubber-covered wires.

6. Demonstrate how to rescue a person in contact with a live electrical wire, and have a knowledge of the method of resuscitation of a person insensible from a shock.

7. Diagram a typical electric lighting and wiring system of an automobile.

8. Make and submit a diagram or sketch, showing the lights, switches and convenience outlets which are controlled by each fuse in his dwelling house or a dwelling house.

9. Read correctly an electric meter and compute a residence bill.

Farm Home And Its Planning

To obtain this Merit Badge, a Scout must:

1. Make a sketch of a farm house, showing location and relation of house to farm buildings, pens, yards, garden, fields wtih proper landscape effect.

2. Present a landscape plan for a farm home showing both front and back yard effect and show drainage plans.

3. Present a drawing plan of sewage disposal for a country home.

4. Describe the value of windbreaks for a rural home, and the kind of trees of most value for such purpose in his section.

5. Tell where and when he would plant nut and fruit trees for a country home.

6. Name seven suitable shrubs, plants and vines for the farm door yard.

Farm Layout and Building Arrangement

To obtain this Merit Badge, a Scout must:

1. Make a pen drawing of a barnyard plan providing for location of barns, feed lots, silos, hog houses, hen houses, machine sheds, hay barn and cow pasture.

2. Make a plan of (a) modern barn, including feed room and manure carriers, to house 20 cows, 30 tons of hay, and 20 tons of grain feed; (b) silo with capacity of 80 tons; and (c) completely equipped sanitary milk house, detached from barn.

3. Give requirements for light, ventilation, and sanitation of a dairy barn.

4. Make a sketch of a poultry plant to house 500 birds.

5. Draw a plan and give the measurement requirements for a 100 ton silo.

6. Show a diagram of a farm of 160 acres indicating a proper layout of house, out buildings and all fields.

Farm Mechanics

To obtain this Merit Badge, a Scout must:

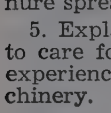
1. Put a new handle in a farm tool, such as axe, rake, hoe, scythe, or shovel, and demonstrate how to sharpen a scythe and a mower sickle.

2. Suggest a plan for labor saving operation involving the use of a gas engine on the Scout's home farm. If circumstances permit, put this plan into actual operation.

3. Demonstrate three ways of splicing wires in farm fencing.

4. Demonstrate how to adjust and actually operate one or more of the following farm machines: corn planter, seeder, tractor, mowing machine, silo filler, corn harvester or manure spreader, as used on the Scout's home farm.

5. Explain fully how to repair farm machinery and how to care for it, both when in use and in storage. Tell what experience he has had in the care and repair of such machinery.



Farm Records and Bookkeeping

To obtain this Merit Badge, a Scout must:

1. Explain fully what kind of records and books should be kept for a general purpose and stock farm. Tell which of these are kept on his farm.

2. Make and submit a poultry and egg production record for one month.

3. Make out a bill of sale for the following to Jones Produce Company, Chicago, Illinois.

160 lbs. of Spring Frys at 38c
32 doz. eggs at 42c
1 Cockerel for breeding purposes $5.75
24 Pullets sold at each 2.50

4. Make a 7-day milk record for a herd of cows.

5. Make out a sample of one year's birth record for 3 colts, 27 calves and 15 pigs.

6. Explain what records are needed in making out an income tax report for his State or Federal Income Tax.

Fingerprinting

To obtain this Merit Badge, a Scout must:

1. Take a clear and legible set of fingerprints, including the rolled and plain impressions on a standard 8 x 8 fingerprint card.

2. (a) Name the surfaces of the human body on which friction or papillary ridges are found. (b) Explain why plain impressions must necessarily be taken on a fingerprint card.

3. Show that he can identitfy the 9 pattern types in which Sir Edward Henry groups fingerprint patterns; collect a specimen of at least 6 of these types.

4. Give a brief history of identification by fingerprinting, and distinguish between civil identifications and criminal identification, pointing out the useful purposes served by each.

5. Obtain the fingerprints of 5 persons and present evidence that these fingerprints, together with complete descriptive data, have been accepted for the civil identification file.

Firemanship

To obtain this Merit Badge, a Scout must:

1. Describe in his own words, the contrast between fire as man's servant (under control), and that same fire as man's enemy (beyond control). From actual incidents, of which he knows personally or has read, describe the loss and other harm which resulted from lack of proper fire protection both in the case of a home and a community. Give statistics indicating the average yearly loss of life and property due to fire.

2. Demonstrate or submit sketches illustrating two of the following:

(a) Proper building of camp fire with relation to inflammable material both around and under place where fire is laid;

(b) How to extinguish a camp fire;

(c) Three practical methods of forest fire prevention;

(d) Three simple methods of forest fire fighting where elaborate equipment is not available.

3. (a) Give three most common causes of fire in the home, other than careless use and storage of gasoline, and tell how each may be guarded against or prevented.

(b) What precautions should be taken for safe use and storage of gasoline and other inflammable liquids.

(c) Submit practical plan of action for the safe escape of the whole household, including himself in case of fire at night; such plan to include:

(1) Diagram of the floors on which family sleeps and of the floors below, if any;

(2) Details of how he would rouse the family and direct their escape;

(3) List of fire protection equipment necessary in his home, depending upon whether he lives in urban or rural community.

4. Personally conduct at least one fire drill in his Troop meeting place.

5. Demonstrate:

(a) How to light and discard a match safely;

(b) With another Scout as subject, what to do in case latter's clothes become ignited, both where blanket or rug is available, and where no such aid is available;

(c) With several other Scouts, formation of a "bucket brigade";

(d) How to make a satisfactory fire pail from a No. 10 can;

(e) What he would do if caught in a room filled with chemical fumes or smoke;

(f) How to extinguish fire under hood of automobile.

6. Explain:

(a) At least two causes which are likely to result in spontaneous combustion and how it may be prevented in each case;

(b) Three ways of turning in a fire alarm, citing best local method and giving exact location of nearest fire alarm to his home, Troop meeting place, and place of employment or school;

(c) Principles underlying at least three common types of fire extinguishers and how to operate each;

(d) Precautions and measures he would take to rescue animals from a burning stable.

First Aid

To obtain this Merit Badge, a Scout must:

1. Review Second and First Class First Aid Requirements, including demonstrations.

2. Show correct way to: (a) prepare for transporting a person with a compound fracture of the forearm; (b) make and apply splint for broken thigh.

3. Show how to: (a) stop bleeding from a ruptured varicose vein in leg; (b) control arterial bleeding on wrist and calf of leg simultaneously.

4. Explain what to do in the case of a man grasping, or otherwise in contact with an electric wire, or lying across the power rail of an electric railway.

5. Tell briefly what to do for a man found in a starving condition.

6. Show what to do in the case of a person who chokes from drawing water or food into his windpipe while eating.

7. Demonstrate with a small piece of cloth how he would sterilize and make safe a part of his shirt if he had to use it for an improvised dressing.

8. Tell what fatal disease germ is likely to be carried into a wound from a gun shot, knife thrust, rusty nail, pitchfork or garden rake, or from a powder burn; why the patient in every case must be taken to the doctor for a supplementary treatment.

9. Tell the dangers involved in the immediate transportation of an injured person where the extent of the injury is not known.

10. Explain what he would do if a companion dived into shallow water, and struck his head, staggered ashore and fell unconscious.

11. Show treatment for extreme shock, using cover, correct position and heating devices.

First Aid to Animals

To obtain this Merit Badge, a Scout must:

1. Prepare and explain a schedule for the proper management of at least one farm animal, covering a period of one month, to show what must be done to prevent illness,

blemishes, defects, and disease, arising from improper or unsanitary surroundings.

2. Be able to recognize the symptoms and explain the proper treatment for the following: Horses: (a) lameness, (b) exhaustion from overheating, (c) distemper. Cows: (d) Milk fever. Sheep: (e) Foot and mouth disease, (f) anthrax. Hogs: (g) cholera. Dogs: (h) distemper, (i) rabies.

3. Explain fully what he would do for the animal in the following emergencies; (a) wire cuts, (b) choking, (c) colic, (d) bloat, (e) when a horse falls in stall or on the highway, (f) cruelty or neglect of domestic animals.

4. Demonstrate on an animal how to treat: (a) a broken bone, (b) a sprain, (c) serious bleeding, (d) an open sore.

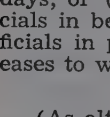
5. Present evidence that he has: (a) assisted in the care of an injured or sick animal for a period of at least four days; or (b) cooperated with humane society or local officials in behalf of animals; or (c) cooperated with local officials in prevention of hog cholera or other infectious diseases to which farm animals are subject.

OR

(As alternative to foregoing set of five requirements)

Comply with 4-H Club or Home Project requirements in First Aid to Animals as follows:

1. Carry out all projects as required by leaders.
2. Do all work as required for a season or year.
3. Keep an accurate record of each project in First Aid work and report results.
4. Demonstrate First Aid to Animals, as required by his leaders.



Forestry

To obtain this Merit Badge, a Scout must:

1. (a) Identify 15 kinds of tree or shrub; or

(b) If there are less than 15 such kinds growing within a five-mile radius of the Scout's home, identify three-fourths of the different kinds available.

2. Collect and identify ten different kinds of wood and be able to tell some uses for each, which he himself has observed.

3. (a) Collect and identify seeds of 10 different kinds of tree or shrub or

(b) If there are less than 10 kinds of tree or shrub which seed within a five-mile radius of the Scout's home, then collect and identify seeds from three-fourths of such kinds.

4. Describe (or, if possible, point out in the woods) the damage that fire does to tree trunks, bark, roots and seedlings.

5. Describe how to fight and stop a surface fire, or a ground fire if such occurs within his region, and tell the

chief causes of forest fire.

6. Measure the heights and diameters of three good-sized trees, report measurements, and describe the methods used.

7. Present evidence that he has done something specific in furtherance of forestry, equal in service to one of the following:

(a) Planting 100 trees, preferably seedlings grown by himself.

(b) Thinning or "weeding" (cutting out worthless or inferior species) one-quarter acre of young or medium-aged woodland.

(c) Helping to extinguish a forest or woods fire, or reporting same to some responsible person.

(d) Collecting and burning fifty tent caterpillar or other equally destructive insect egg masses or nests.

Foundry Practice

To obtain this Merit Badge, a Scout must:

1. (a) Make a freehand working drawing of a flask used for bench moulding in the foundry.

(b) Describe same flask.

2. (a) Show by section sketch a mould of a plate 12″ long, 6″ wide, 1″ thick with gate and vents.

(b) Construct the mould.

3. Make a perspective sketch of a pulley pattern 6″ in diameter, 2″ face, the center to be cored 2″ by use of core prints.

4. Construct a wood pattern and core box as per sketch outlined in question 3; use shrinkage rule for the metal used, gray iron, bronze or brass. Change measurements to allow for finish all over casting and proper draft for removing pattern from mould.

5. Describe how a cupola operates.

6. (a) Describe a process for cleaning one of the above castings when removed from mould.

(b) Clean one of the above castings.

7. Describe the properties in sand that are best suited for foundry use and tell how to prepare sand for use.

8. Tell what important Safety precautions should be taken to protect the workers in a foundry—by the employer—by the employee.

NOTE: In each case when a mould is required the pattern must first be made.

Fruit Culture

To obtain this Merit Badge, a Scout must:

1. Prune a fruit tree and explain why such pruning was done.

2. Make a plan for planting a 2-acre fruit orchard.

3. Prepare and demonstrate how to use the following apple or other fruit tree sprays:
(a) Dormant spray
(b) Bud spray
(c) Calyx spray
4. Demonstrate how to grade and pack two kinds of fruit.
5. Explain requirements for planting and management of two kinds of small fruit.
6. Bud or graft two fruit trees.
7. Demonstrate the propagation of grapes, strawberries and raspberries, and explain when and how to plant.

Gardening

To obtain this Merit Badge, a Scout must meet Requirement No. 4 and any other four of the seven following requirements:

1. Name and explain the food value of each:
(a) 5 kinds of root vegetables.
(b) 3 common garden herbs and 3 leafy vegetable greens grown in his locality.
2. Make a plate and blotter tester for garden seed and explain how vitality tests are made. Test 100 garden seed in this tester and show vitality record.
3. Make a hot bed not less than 4 ft. long x 3 ft. wide; fill and prepare its seed bed for planting.
4. Raise from seed in a box or cold frame 20 of each of two of the following vegetables and transplant them to a garden plot: tomatoes, peppers, sweet potatoes, cabbage, lettuce.
5. Demonstrate how to control at least three insects or diseases injurious to vegetable crops.
6. Demonstrate how to clean, grade, and bunch or pack for market any three vegetables.
7. Exhibit at least three kinds of high quality vegetables, one variety of each, at community, county, state fair or other public event.

OR

Comply with 4-H Club or Home Project requirements in Vegetable Gardening by carrying out one of the following projects, viz., A or B:

(A) Operate a garden of not less than 400* square feet. Grow at least six (6) different kinds of vegetables. Make a diagram of the garden with records of varieties used, planting and maturity dates, and quantities harvested. Keep a brief running account of operations for the garden as a whole and for the various crops.

(B) Grow 1/20 acres or more of a single vegetable crop, such as tomatoes, potatoes, sweet corn or popcorn. Keep record of how he grows the crop from planting to harvest, and of costs, yields and returns.

In both A and B record must be submitted and completed project approved by leaders in charge of 4-H Club Work or agricultural teacher in charge of Home Project Work.

*Garden size should conform to minimum standards set by State, County or School Leaders.

Any Scout not a member of a 4-H Club or agricultural class may if he wishes qualify by fulfilling A or B, provided Merit Badge Counselor and local leaders of 4-H Clubs or agricultural teachers agree that the work has been properly done.

Grasses, Legumes and Forage Crops

To obtain this Merit Badge, a Scout must: Meet three out of five requirements as indicated in each of the four divisions, or a total of twelve requirements out of the twenty.

(*Grasses—Any three*)

1. Show samples of five kinds of perennial grasses and explain their uses for feed purposes, soil conservation, and control of erosion.

2. Show how to prepare a seed bed for a lawn, pasture or meadow.

3. Show: (a) samples of three annual grasses used both for hay and pastures;

(b) samples of three large seed grasses, explaining the practical use of each.

4. Make a blotter, plate or rag doll seed tester and show how to use in testing seeds for vitality.

5. (a) Make an exhibit of the six most important grasses common to his locality. Identify and explain use of each.

(b) Explain the difference between "bunch grasses" and "sod-forming" grasses and their uses.

(*Legumes—Any three including Requirement* 1 *or* 3)

1. Show samples and name the five most important legume crops grown in his section.

2. Name three small seed legumes, and three large seed legumes. Explain use of these for feed, soil conservation, cash crop and for maintaining soil moisture.

3. Show how to fertilize, lime, prepare seed bed, seed and manage a crop of legumes grown in his locality.

4. Explain: (a) how legumes, such as soy beans, cow peas, alfalfa and clover may be used to build soil fertility and control erosion.

(b) under what conditions legumes deplete the soil.

5. Explain: (a) what is meant by inoculation of legumes.

(b) how this is done, and why it is important.

(*Pastures—Any three including Requirement* 3 *or* 5)

1. Explain the best method for improvement of old pastures, and how to manage and maintain pasture fertility in his section.
2. Explain under what conditions grasses, legumes and hay fields may be used for pastures.
3. Make an exhibit or collection of five poisonous or undesirable grasses and weeds which are injurious to pastures or poisonous to livestock.
4. Explain from personal observation how cows, horses, and sheep differ in their grazing methods or habits.
5. Prepare an exhibit of at least five pasture grasses, showing whole plant, with stem, leaf, flower and seed.

(*Hay Crops—Any three*)

1. Explain how grasses such as legumes and grain crops may be used for hay or feed for livestock and wild game.
2. Give directions on how to store hay crops safely in barns, stacks, sheds and in bales. Explain how to prevent hay barn fires and combustion.
3. Make a mounted exhibit of five kinds of properly cured hay crops; explain the qualities of "succulent" or "well-cured" hay.
4. Show samples of not less than two kinds of hay crops best suited to different live stock, such as dairy cows, horses, sheep, deer and beef cattle.
5. Show how to operate one hay-making machine and one hand tool; name five tools and machines used for hay-making in his locality; explain the purpose of each.

OR

Comply with the 4-H Club or Home Project Requirements in Grasses, Legumes and Forage Crops as follows:

1. Manage or operate a project of lawn, pasture, legume or hay crop, as required by leaders.
2. Do all work, follow instructions for season or year, as required by leaders in charge.
3. Keep accurate cost account records as required by leaders.
4. Exhibit samples of products, record book and story, as required by school or county 4-H Club leader.

Handicraft

To obtain this Merit Badge, a Scout must meet any 18 of the following requirements:

1. Paint a door or a piece of furniture.
2. Whitewash or calcimine a ceiling.
3. Repair gas fittings.
4. Repair sash lines.
5. Repair window and door fastenings.
6. Replace gas mantles, or fuse plugs and electric light bulbs.
7. Replace washers.

8. Solder.
9. Hang pictures and curtains.
10. Repair window shades.
11. Repair curtain or portiere rods.
12. Lay carpets.
13. Mend clothing.
14. Mend upholstery.
15. Repair furniture.
16. Repair china.
17. Sharpen knives.
18. Repair gates or sagging doors.
19. Repair screens on windows and doors.
20. Varnish floor or wood work, or revarnish furniture.
21. Wax or polish floor.
22. Set glass.
23. Clean out a sink trap.

Hiking

To obtain this Merit Badge, a Scout must:

1. Walk ten continuous miles on each of two days each month for a period of three months; in other words, six walks of ten miles each during the three months. He shall submit to the Merit Badge Counselor a report of the hikes taken including dates, routes traveled, and interesting things observed.

2. After the three-month conditioning period in Requirement No. 1, walk twenty miles in one day.

3. Describe to the Counselor the location and interesting features of trails over which he has hiked; and hike to some place marked by some patriotic or historic event, and produce photographs, nature specimens or other interesting exhibits secured in such hike.

4. Write his experiences in these several walking trips indicating what he has learned in the way of caring for himself as regards equipment, such as camping and cooking outfit, food, foot-wear, clothing and hygiene. He shall show a thorough knowledge of the care of the feet on a hike.

5. Demonstrate in connection with the fulfillment of the first three requirements, his ability to read a road map (preferably a Government topographical map) to use a compass, and make a written plan for a hike from the map.

Hog and Pork Production

To obtain this Merit Badge, a Scout must:

1. Visit five or more farms and name and describe five breeds of hogs found thereon.

2. Confer with meat market men and from their in-

struction draw a diagram of a hog, and mark and name the parts for butcher classification and sale of pork products.

3. Explain the different uses of hog products for both commerce and food.

4. Salt at least 2 pounds of pork or smoke 2 pounds of ham, and explain method.

5. Attend state or county fair, and describe life history of one breed of hogs shown at such fair.

6. Write out a balanced ration for fattening hogs, and give reason for its preparation.

7. Explain fully symptoms of hog cholera and preventive measures used.

8. Name the different kinds of food rations needed for hogs from weaning time to market.

OR

Comply with the 4-H Club or Home Project Requirements in the Pig Club as follows:

1. Own a pig or hog.
2. Do all the work in its care and management.
3. Keep accurate account records.
4. Exhibit the pig or hog as required by state and county leaders in charge.
5. Make complete report at end of season or year as required by leaders.

Horsemanship

To obtain this Merit Badge, a Scout must: Meet any seven of the following requirements:

1. In presence of Counselor—

(a) Harness a horse OR

(b) Saddle and bridle a horse, point out and explain use of five important parts of both saddle and bridle.

2. In presence of Counselor—

Ride a horse at a walk, trot and one other gait, mounting and dismounting correctly.

3. Explain symptoms of colic, distemper, and four other common horse diseases.

4. Explain how to detect defects of the legs and feet of a horse, such as ringbone, spavin, shoe boil and splint.

5. Give at least six practical suggestions for management and treatment of a pair of draft horses on hot summer work days, and give practical directions for watering and bedding of horses after a trip or day's work.

6. Give best feed rations for draft horses when at work in hot weather and when idle in cold weather, explaining why change of feed is necessary.

7. Name four leading breeds of horses and explain fully for what each breed is noted.

8. Show how to clean, oil, and treat bridle, saddle or harness to keep leather in good all-weather condition.

9. Show how to approach horse in stall in case of fire and how to remove him safely from stall and barn.

10. Show how to manage a horse and handle front and rear legs while being shod.

OR

Meet the season or year-round requirements of a 4-H Club project or agricultural home project in Horsemanship as programmed by the state, county and local leaders. This may involve membership in a Colt Club or carrying out an actual project in Horsemanship for a whole year under leadership.

Indian Lore

To obtain this Merit Badge, a Scout must:

1. Give history of the Indian Tribe that once lived nearest his home, telling something of their customs and habits, where the survivors remain, and their present condition. Visit them if possible.

2. Make an Indian costume complete and correct as to detail for one of the tribal groups, to consist of head-dress, shirts, leggings or kilt, and moccasins.

OR

Make and decorate authentically three of the following articles, using Indian methods in so far as possible: drum (tom-tom), rattle, bow and arrows, quiver, coup stick, or lance, pipe, pipe bag, belt, war bonnet, crow belt or "bustle," war club, totem pole, council seat or canoe paddle.

3. Make a model of a tepee, or of any other type of Indian dwelling.

4. Take part in an Indian Pageant, entertainment, or camp fire ceremonial in which at least three dances based on authentic Indian themes are used.

5. Sing three Indian songs including the Omaha Tribal Prayer and tell something of their meaning.

6. Demonstrate three Indian games that can be played in camp or at meetings.

7. Know at least fifty signs in the Indian Sign Language and with them carry on a conversation for three minutes, or tell a story in sign talk that will take at least that much time.

Insect Life

To obtain this Merit Badge, a Scout must:

I. Go into the country with the Examiner and show to him the natural surroundings in which certain specified insects live, and find and demonstrate living specimens of the insects, telling of their habits or of the nature of their fitness for life in their particular surroundings.

The Examiner shall ask for an insect from each of five of the following groups without fore-warning to the candidate, but the Scout shall have the choice of kind within each group.

1. (a) May-fly nymphs; (b) caddis worms; (c) ant-lion larvae (doodle-bugs).
2. Larvae and pupae of mosquitoes.
3. (a) Centipedes; (b) scorpions; (c) orb weaver spiders.
4. (a) Scale insects; (b) plant lice.
5. (a) The nest of a solitary bee or wasp and its maker (mud daubers excluded); (b) bumble-bees and their nest.
6. (a) Back swimmers; (b) whirligig beetles (demonstrate a peculiarity of their eyesight); (c) water striders.
7. (a) Carrion beetles; (b) tumble-bugs; (c) leaf-beetles.
8. (a) Colony of carpenter ants or (b) of agricultural ants; (c) black-fly larvae; (d) white ants.
9. (a) Crane-flies; (b) robber-flies; (c) damsel-flies and their nymphs.
10. Caterpillar of (a) cabbage butterfly, (b) alfalfa butterfly, (c) monarch butterfly, (d) sphinx moth, (e) tiger beetles.
11. (a) Grouse locust; (b) meadow grasshoppers; (c) katydids.
12. (a) Squash bugs; (b) chinch bugs; (c) larvae of gall wasps and their galls; (d) other kinds of gall insects.

II. Make an artificial ants' nest suitable for observation and maintain a colony of ants for a period of at least two weeks. Make a record of interesting facts and habits observed. Or do the same with an observation hive of bees.

III. Make a collection of fifty species of insects. This collection will be judged upon 4 points: 1, correctness of names; 2, neatness of arrangement; 3, perfect condition of the specimens (clean, unbroken and properly mounted); 4, adherence to the following rules:

(a) It is recommended that each species should be represented by two male and two female specimens when such specimens can be easily found and the sexes may be readily identified.

(b) A neat written or typewritten label stating the name of the species (either common name or scientific, or both) to be pinned on the left of, or above, the row of specimens of each species.

(c) The species of each family and order to be arranged together; the sequence of orders and the families to be best followed in a text book; the scientific name of each to be indicated by appropriate labels.

(d) Entomological pins to be used when obtainable instead of common pins.

IV. Give evidence that he had bred through all its life stages, from egg or young larvae to adult, at least one species of insect. Mosquitoes, blow-flies, cabbage butter-

flies, fruit flies, and ants are suggested as easy species to rear.

(Near relatives of insects are included in the Insect Life Merit Badge requirements as a matter of convenience, and in compliance with the common custom of extending the term entomology to include the study of the close relatives of insects.)

Interpreting

To obtain this Merit Badge, a Scout must:

1. Carry on a simple but sustained conversation in a modern foreign language for a period of not less than five minutes.

2. Listen to and translate a statement or address delivered in a modern foreign language and lasting not less than two minutes by a person to whom the language is a native tongue.

3. Write a simple letter in a modern foreign language on a subject given by the Counselors.

4. Read and translate from sight a passage of not less than 200 words from a book or newspaper, in any modern language not native to the pupil.

Journalism

To obtain this Merit Badge, a Scout must:

1. "Cover" satisfactorily the following assignments:
   (a) News incident.
   (b) Routine club or society meeting.
   (c) Lecture, sermon, or political address.
   (d) Theatrical performance.
   (e) Subject or event to be suggested by Counselor.
2. Write:
   (a) An editorial.
   (b) A publicity article.
   (c) A feature, or human interest story.
3. (a) Explain the respects in which the articles in requirement one and two are different; (b) secure the publication of at least one of these articles.
4. (a) Describe the elements of a good lead paragraph; (b) explain the use and importance of headlines; (c) prepare for the linotype operator three good headlines for stories submitted in requirement one.
5. Read and correct proof, using the conventional proofreader's signs (manuscript of two typewritten pages to be furnished by Counselor).
6. Submit four styles of advertising copy for a local magazine or newspaper.
7. (a) Submit suggestions for photographic or cartoon

copy; (b) explain briefly the various engraving processes.

8. Prepare a dummy for the printer representing one issue of an eight-page paper, magazine, catalogue, or circular.

9. Produce copy to show what is meant by each of the following terms: linotype, handset, galley proof, electrotype, form, mat, stereotype, case.

10. Explain what steps are necessary to copyright a manuscript and tell what rights are granted by a copyright, and for what period.

11. Serve as a reporter (either voluntary or paid) for local school, farm, club, trade, or other paper for a period of six weeks after becoming a First Class Scout, or until at least six news items shall have been accepted.

12. Present a scrap book prepared in the customary way to include unpublished copy, as well as clippings of published material filed under date and place of publication.

The following requirement may be chosen as an alternative to the above twelve:

Conduct an authorized, chartered amateur publication, under the standards set by the National Council, Boy Scouts of America, for at least five consecutive issues. Scouts who are members of the Editoral Staff (editor-in-chief and not more than three assistants) of an authorized, chartered Local or Area Council publication and who work under supervision of Local Scout authorities may also receive the Merit Badge in Journalism.

Landscape Gardening

To obtain this Merit Badge, a Scout must:

1. Tell where in his locality the two general plans of Landscape Gardening may be found. Describe each and tell how he would improve the landscaping on the properties named.

2. Name and give the advantages and disadvantages of at least five trees frequently used in Landscape Gardening in his community, telling their characteristics. Explain from observation in his community how they have been used effectively.

3. Name and give the main characteristics of at least fifteen shrubs, evergreen or deciduous, which he has observed in his locality for landscape work (height, flowering or non-flowering, space required, propagation).

4. Make a working drawing of a landscape project, using appropriate plants of his selection. This may be foundation planting, boundary planting, or screen planting of some building or grounds, preferably his own home.

5. Make a drawing of a flower garden or border, and arrange the planting so that once they start to bloom there will be as nearly as possible a continuous showing of

flowers at some point in the garden during the season.

6. Plant the above and take care of it, and if flowers are sold or given away, make a report.

7. Keep a time sheet of all work put in, and its cost, including shrubs, seeds, plants, etc.

Leathercraft

To obtain this Merit Badge, a Scout must:

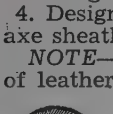
1. Know the source and method of preparation of the best grades of leather for craftwork, tell what type of leather is best for each kind of leathercraft (such as tooling, stamping, moccasins, bookmarks, novelties, etc.).

2. Design and tool some object in leather, such as a mat, blotter pad corners, bill fold, magazine cover, belt; or design and stamp such an article, using at least two stamps manufactured by himself, presenting evidence of having personally made the stamps.

3. Know three methods of braiding leather, and produce an article made by himself of braided leather; demonstrate how to end braiding with a Turk's-head and how to make a sliding knot.

4. Design and make a laced article, such as a knife sheath, axe sheath, camera case, first aid case.

NOTE—In Requirements 2, 3 and 4, recognized imitations of leather may be used.



Leather Work

To obtain this Merit Badge, a Scout must:

1. Have a knowledge of tanning and curing.

2. Sole and heel a pair of boots, sewed or nailed, and generally repair boots and shoes.

3. Dress a saddle and repair traces, stirrup leathers, etc., and know the various parts of harness.

Life Saving

(These tests must be performed before a Counselor who holds the American Red Cross Senior Life Saving Membership Card.)

To obtain this Merit Badge, a Scout must first have met the Merit Badge Requirements for Swimming, must have spent at least six hours in preparation and practice, and must demonstrate the following:

1. Demonstrate twice his ability to remove, except underpants or bathing trunks, street clothes* in 20 seconds or less.

2. Watching struggling person constantly, remove street clothes on shore in 20 seconds, enter water feet first (by

jumping or running), swim 30 feet, make correct approach, and tow victim 30 feet with head carry.

3. Watching struggling person constantly, enter water feet first (by jumping or running) and—

(a) Swim 30 feet, make correct approach, and tow victim 30 feet to shore with hair carry.

(b) Swim 30 feet, make correct approach, and tow victim 30 feet to shore with cross chest carry.

4. Enter water with a pancake dive, swim 30 feet, make correct approach to a tired person and use tired swimmer's carry for 30 feet to shore.

5. In water at least 6 feet deep, demonstrate how to block effectively, or to avoid by ducking, the grasp of a struggling person and how to turn and place him in a position for towing ashore.

6. Release—

(a) Double grip on one wrist, left and right.

(b) Front strangle hold, left and right.

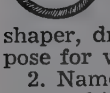
(c) Back strangle hold, left and right.

7. Demonstrate resuscitation, 1½ minutes, prone pressure method.

8. Surface dive in 6 to 8 feet, recovering various objects three times and a 10-pound weight once.

9. In deep water, remove street clothes and swim 100 yards.

**Street clothes mean socks, low shoes, underwear (or bathing suit), trousers, shirt, tie, and coat or sweater or sweatshirt.*



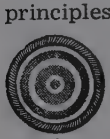
Machinery

To obtain this Merit Badge, a Scout must:

1. Describe the construction of a lathe, planer, shaper, drill press, and steam boiler; also explain the purpose for which each is intended.

2. Name at least twelve of the principal hand tools used by machinists.

3. Construct a wood or metal model illustrating the principles of levers, gears, pulleys or block and tackle.



Marksmanship

To obtain this Merit Badge, a Scout must:

1. (a) Make not less than 30 points in the off-hand position (standing) out of a possible 50 points, in 5 shots, on each of four targets, at a distance of fifty feet from firing point to target.

(b) Make a score of not less than 40 points in the prone position out of a possible 50 points, in 5 shots, on each of six targets, at a distance of fifty feet from firing point to target.

(c) All shooting must be witnessed and targets signed by a range officer whose appointment has been approved by the Local or National Council.

2. (a) Pledge his word that he will live up to the Boy Scout Marksman's Code.

(b) Explain his understanding of the meaning of the first four rules of safety in the Boy Scout Marksman's Code, and demonstrate Nos. 2, 3, and 4.

3. (a). Demonstrate with a rifle:

1. The proper way to clean it after using;
2. What rifling is, and explain the function of rifling;
3. In what direction the rear sight should be moved, to move the striking point of the bullet (a) from right to left; (b) from below the target upward to the target (sights need not be actually moved for this demonstration).

(b) Explain the proper method of removing rust and leading from the bore of a rifle.

Boy Scout Marksman's Code

1. *A Scout considers every gun as being loaded, even though he has personally unloaded it.*
2. *A Scout points the muzzle of a gun in a safe direction on picking it up.*
3. *A Scout opens the action of a gun immediately and makes sure that it is not loaded.*
4. *A Scout opens the action of the gun before he passes it to another person.*
5. *A Scout takes care not to heedlessly point a gun at any human being under any circumstances.*
6. *A Scout turns the muzzle of a firearm away from every person when loading it.*
7. *A Scout strives to preserve harmless animals and birds, and does not wantonly shoot or kill merely for the sake of killing.*
8. *A Scout takes every precaution for the safety of others before shooting in the open.*
9. *A Scout cares for a firearm properly before he lays it aside.*
10. *A Scout is sportsmanlike when engaged in contests of skill with firearms and whenever handling firearms.*

Conditions

RIFLE: Any .22 calibre rimfire.

SIGHTS: Any not containing glass.

TARGETS: Fifty-foot official Boy Scout Marksman or N.R.A. Target, 2 to 10 Count.

RANGE: Fifty feet from firing point to target.

GUN SLING: Gun sling may be used in connection with one arm only. It may not be placed around any other portion of the body. It may be attached only to fore end and butt.

POSITIONS—*Standing*: Erect on both feet, all other portions of body free from all artificial support. Use of sling allowed.

Military or hip rest position with elbow on hip and rifle resting on tips of fingers optional. The use of belt to assist in holding elbow in this position is not permitted.

Prone: Body extended on the ground, head toward target; no portion of arms except the elbows shall rest on ground, floor, or any artificial support, rifle to be free from any artificial support. Use of sling allowed.

Masonry

To obtain this Merit Badge, a Scout must:

1. Lay a straight wall and a corner.
2. Make a mortar and describe process.
3. Use intelligently a plumb-line, level, and trowel.
4. Build a stone oven.
5. Demonstrate a knowledge of the various uses for cement.
6. Build a dry wall.

Mechanical Drawing

To obtain this Merit Badge, a Scout must:

1. Make a preliminary rough sketch drawn to approximate scale, and from it submit a finished accurate scale floor plan of his Troop meeting room, or a room in his church building, school, or home, such drawing to be properly titled and to indicate by accepted conventional symbols, all openings, equipment, safety devices, etc. List drawing instruments used.

2. Submit an accurate scale drawing of some piece of craft work for use in home, school, Troop meeting place, or camp, which is sufficiently clear and detailed to be used by some one else as a working basis for making the article; drawing to include a bill of material with an estimate of cost for such craft article.

3. Submit drawings made by himself of each of the following:

(a) Orthographic projections, and an isometric projection, of an object other than those specified in Requirements No. 1 and No. 2.

(b) Reduce or enlarge a simple scale drawing approved by his Counselor, indicating the scale of enlargement or reduction he has used.

4. Make ink tracing of craft article in Requirement No. 2

and submit cost of reproducing drawing by blueprinting, or photostating, or other method of reproduction.

5. (a) Submit a hand-lettered poster or bulletin, approximately 22″x28″, for use by some group such as school, church, Troop or Council.

OR

(b) Submit a hand-lettered personal greeting card for someone's birthday, a holiday, or other similar occasion.

Metal Work

To obtain this Merit Badge, a Scout must:

1. Design and make some simple object in which the operation of soldering is employed; such as box corners, a desk set, candlestick, ink-well.

2. Design and make some simple object in which the operation of riveting is employed; such as a candlestick, candle shade, Paul Revere lantern, stationery holder.

3. Design and make some simple object in which the operation of sawing or piercing is employed; such as a watch-fob, escutcheon plate, hinges, candle shade.

4. Design and shape some simple object by heating metal; such as a tray, bowl, spoon, ink-well.

Music

To obtain this Merit Badge, a Scout must:

1. Play a standard musical instrument satisfactorily, as used in orchestra work, or demonstrate that he is sufficiently proficient in the art of singing to read music at sight, following the melody, and carry his part against another in singing a duet or quartette, and sing a prepared solo showing that he knows the various musical signs which are common to vocal music.

2. Read at sight simple music required for the fourth grade in musical education.

3. Write a satisfactory essay of not less than five hundred words on the history of American music.

Nut Culture

To obtain this Merit Badge, a Scout must:

1. Know the methods used in the propagation of at least four of the following nuts which involve the practices of budding, grafting, lavering, and growth of seedlings: Pecan, Persian Walnut, Almond, Hazel, Black Walnut, Chestnut, Butternut, Hickory, Japanese Walnut.

2. Know the principals underlying the practice of grafting and the methods used in topworking nut trees.

3. Know the characteristics of the root systems of at

least two kinds of nut trees in each of the following two groups:

Group One	*Group Two*
1. Hickory	1. Butternut
2. Pecan	2. Japanese Walnut
3. Black Walnut	3. Hazel
4. Persian Walnut	4. Almond

4. Know the essential features of successful nut tree planting —i.e., the time of year for the region concerned, the necessary pruning at planting, etc., and the reasons for the practices involved.

5. Know the most injurious pests and diseases which affect the most important kinds of nut trees grown in his section of the country and the measures necessary for their control.

6. Know how properly to care for nut trees not grown in orchards. Or, if the Scout is in a region where nuts are grown commercially, know the methods of soil management practiced in successful commercial orchards.

7. Grow at least one kind of nut tree from seeds, the seedling to be used either as a stock for budding or grafting, or as a tree to be set out.

8. Either bud or graft a living tree successfully with some superior variety of nut so that the bud or graft lives at least one growing season.

9. Plant at least two nut trees which start growth and live for at least one growing season.

10. Practice the removal of limbs in pruning so as to be able to demonstrate the way to make cuts properly.

11. Take care of one or more black walnut or other trees during the summer, keeping them free from worms or other caterpillars that can be controlled without spraying apparatus. Or, if the Scout lives in a region where nut orchards are sprayed, keep an accurate record of the spraying method used in a commercial orchard, giving dates of spraying, materials used and pests and diseases the spray is intended to control.

12. Make a collection of eight kinds of nuts including several varieties of each kind. Or, if the Scout is in a section where nuts are commercially grown, make a collection of eight named varieties of the most important kind of nut for the region, and be able to identify the varieties. Gather specimens of nuts which represent parent trees and nut seed such as he would recommend for planting.

Painting

To obtain this Merit Badge, a Scout must:

1. Demonstrate how to combine pigments in order to produce paints in shades and tints of color.

2. Demonstrate how to add positive colors to a base of white lead or white zinc.

3. Understand the mixing of oils, turpentine, etc., to the proper consistency.

4. Paint a porch floor or other surface evenly and without laps.

5. Know how and when to putty up nail holes and uneven surfaces.

6. Present for inspection a panel covered with three coats of paint, which panel must contain a border of molding, the body of the panel to be painted in one color and the molding in another.

7. Demonstrate a knowledge of the care and proper method of cleaning paint brushes.

Pathfinding

To obtain this Merit Badge, a Scout must:

1. Demonstrate a general knowledge of the district within a three-mile radius of the local Scout Headquarters, or his house so as to be able to guide people at any time day or night to points within this area.

2. Know the population of the five principal neighboring towns and cities as selected by his Guide or Counselor. Demonstrate direction for reaching them from Scout Headquarters or his house.

3. If in the country, know the breeds of horses, cattle, sheep and hogs owned on the five neighboring farms; if in the city, demonstrate directions to tourist camp and to five places for purchasing food supplies.

4. Demonstrate how to direct tourists from his home to gas, oil, tire and general auto repair service.

5. Give telephone number, if any, and directions for reaching the nearest police station, fire-fighting apparatus, Court House or Municipal Building, the nearest County Farm Agent's office, doctor, veterinarian and hospital.

6. Know something of the history of his community and the location of its principal places of interest and public buildings.

7. Submit a scale map, not necessarily drawn by himself, upon which he has personally indicated as much as possible of the above-required information.

Personal Health

To obtain this Merit Badge, a Scout must:

1. Submit evidence of having had a medical examination within one year.

2. (a) Show proper method of brushing teeth and discuss the importance of dental care to general health.

(b) Give evidence of and discuss proper care of hands

and feet; tell how to care for the feet on a hike; how to guard against infection known as "Athlete's Foot"; explain the value of (1) a shoe made on a Munson last and (2) wool stockings for winter wear and in wet weather.

(c) Explain importance of (1) washing hands after leaving toilet as well as before eating; (2) frequent soap baths, particularly after hard exercise; (3) daily elimination, and discuss methods by which the body disposes of its wastes.

3. (a) Make up a bed on the ground or floor showing how to get the most benefit from (1) ground cloth and two blankets; (2) ground cloth and one blanket.

(b) Name at least five devices (other than bed clothes) for maintaining body heat while sleeping in cold weather; discuss methods of ventilating a sleeping-room.

(c) Give number of hours of sleep considered necessary for a person his age; tell why a person should sleep by himself, and what distance should separate the beds of sleepers.

4. Demonstrate proper breathing and explain how it affects health.

5. Explain how disease is transmitted by: drinking water, common drinking cups, dirty dishes, dirty dish towels, soiled bath towels, unpasteurized milk, personal contact.

6. Explain what foods are considered essential in the daily diet of a person his age; explain the harm of eating between meals, eating irregularly, too much candy, rich or excessively sweetened food.

7. Explain danger of (1) taking a laxative when suffering from pain in stomach; (2) neglecting any break in the surface of the skin; (3) opening or squeezing a pimple.

8. Give three good reasons why alcohol and tobacco are harmful to a growing boy.

9. Discuss the value of self-control to general health.

Photography

To obtain this Merit Badge, a Scout must:

1. Show that he is thoroughly familiar with the essential parts of a camera and explain the purpose of each of the following: finder, lens, shutter, diaphragm opening, bellows, focusing scale.

2. Understand the basic principles of composition, selection of background and handling of light and shade.

3. Name the chemicals found in one standard developing solution and one fixing solution, and explain their purpose.

4. Submit six good quality pictures taken, developed and printed by himself, putting into practice his knowledge of the principles in Requirement No. 2. (Not more than two pictures may be submitted from any one of the following groups, and the collection must include one from each

group.)

GROUP A. Landscape or water pictures.

GROUP B. Groups of persons or street scenes.

GROUP C. Person, domestic animal or bird; wild animal or bird.

GROUP D. Architectural subjects.

Physical Development

To obtain this Merit Badge, a Scout must:

1. Produce satisfactory evidence of habitual good posture.

2. Have no remediable physical defects uncorrected.

3. Produce satisfactory evidence of daily practice of hygienic habits and a thorough knowledge of a standard book on hygiene.

4. Pass three of the tests, according to his weight in the Athletics Merit Badge Schedule.

5. Demonstrate proper form in running, high jump, hurdle and shot-put.

6. Make up a daily drill of ten exercises for Scouts, giving proper exercise for whole body; present evidence of having practiced this daily for six months and having taught the same to two or more boys for a period of three months.

7. Demonstrate reasonable efficiency in two outdoor games requiring physical development; give evidence of having taught at least ten Scout games to a group of boys, and know ten more.

Pigeon Raising

To obtain this Merit Badge, a Scout must:

1. (a) House at least two flock units (viz., pairs of pigeons), having selected the particular breed or variety of squab, racing, or exhibition pigeon which he has decided to develop as a project for this Merit Badge. Give reasons for such selection.*

(b) Care for such flock units for sufficient time to raise to maturity at least two pairs from each original pair of birds.*

2. (a) Submit rough sketch, drawn to approximate scale, showing size, location, and interior equipment of loft or coop, and aviary;

(b) List and describe briefly equipment he has made.*

3. Submit formula for seeds and grit used, and an outline of a week's schedule of feeding, indicating whether he himself mixes the ration or the commercial brands used.*

4. Submit a brief report covering his method and schedule of sanitation, his experience and success in handling or avoiding diseases, lice and mites, rats, mice and other ver-

min, and any other difficulties overcome in handling this project.*

5. Present an itemized account of all expenditures for stock, quarters, equipment and other incidental items.

6. Present (a) An itemized account of all birds sold or disposed of during time of this project, *or*

(b) A list of all entries in flight contests and results secured, *or*

(c) A list of all entries in exhibitions of fancy pigeons and award or recognition secured in each, *or*

(d) A statement of flock increase in numbers and approximate value in the current market.

**Note*: In the case of Requirements 1, 2, 3 and 4 give the source of information or authority for the course followed, i.e., whether based on reading, visits to lofts, coops or squab farms, or counsel with successful pigeon raisers.

Pioneering**

To obtain this Merit Badge, a Scout must:

1. Hand coil length of rope. Describe (a) kinds of rope, (b) care of rope, (c) weakening effect of knots.

2. Tie quickly 12 knots and hitches and explain their specific use in Pioneering.

3. Make a long, a short, and an eye splice.

4. Lash spars together properly using square, diagonal and sheer lashings.

5. (a) Build, without the use of nails, spikes or wire, a bridge or derrick (capable of supporting two hundred pounds in weight) or other practical pioneering project such as signal tower, monkey bridge, gateway; *or*

(b) Build a shack of one kind or another suitable for three occupants.

OR

(c) Using lashings only, make a model bridge at least 18 inches long, and explain the principles involved in its construction.

Plumbing

To obtain this Merit Badge, a Scout must:

1. Submit threaded joints connecting two pieces of iron or brass pipe with a fitting, a repaired lead, iron or brass pipe; and explain how to do all of the above.

2. Be able to repair a Fuller tap or a compression tap.

3. Understand the drainage system of a house, and explain the use of traps and vents.

4. Understand the ordinary hot and cold water system of a house, and explain how to make the system safe from

**Requirements effective January 1, 1942. Optional in 1941.

freezing if the house has to be left without fires in the winter.

5. Know the regulations of the local health department with regard to plumbing.

Pottery

To obtain this Merit Badge, a Scout must:

1. Write an essay of about 500 words describing (a) The nature of pottery and the materials used in making it; (b) The wares of one of the following people or places: Greece, Delft, Damascus, Sevres, Luca Della Robbia, Josiah Wedgwood.

2. Describe the purpose, preparation and application of a glaze.

3. Draw two pottery forms, one of which must be decorated.

4. Design and build by hand a pottery form such as a vase or bowl to be fired and glazed.*

5. Design and make a panel of four decorated tiles, to be fired and glazed.*

*The firing and glazing need not be done by the Scout himself.

Poultry Keeping

To obtain this Merit Badge, a Scout must:

1. Have a knowledge of incubators, foster-mothers, sanitary fowl houses, coops and runs.

2. Understand, through experience, rearing, feeding, killing and dressing birds for market.

3. Be able to candle and pack eggs for market, describe the differences, in candling, which distinguish the bad eggs from the good; and tell how eggs are graded.

4. Raise a brood of not less than ten chickens.

5. Report his observations and study of the hen, turkey, duck and goose.

OR

Comply with the 4-H Club or Home Project Requirements in Poultry Management as follows:

1. Own a pen of chickens.

2. Do all the work in its care and management as required in the project by leaders.

3. Keep accurate cost account records.

4. Exhibit poultry as required by state and county leaders in charge.

5. Make complete report at end of season or year as required by leaders in charge.

Printing

To obtain this Merit Badge, a Scout must:

1. Explain the point system, and identify ten sizes of types.
2. Set and correctly space type by hand from manuscript.
3. Set and print a display card or advertising handbill from original copy for use in connection with the local Scout work.
4. Print one hundred copies of same on a 10 x 15, or smaller, job press, demonstrating correct methods of washing-up, inking, use of setting pins, use of make-ready, and accurate feeding.
5. Read and mark proof correctly.
6. Give the grade or kind of paper most suitable for various classes of printing.

Public Health

To obtain this Merit Badge, a Scout must:

1. State the chief causes and modes of transmission of each of the following diseases: Tuberculosis, typhoid fever, diphtheria, malaria, hookworm disease.
2. Draw a diagram showing how the house-fly carries disease.
3. State the precautions which should be taken to prevent the spread of contagious disease during the sickness of the patient and following his removal or recovery.
4. Describe good methods by which a community may dispose of garbage and sewage, and may obtain a safe water supply, and tell what methods are used in his own community or on his own premises.
5. State the precautions which must be taken in producing and handling milk to make it as safe as possible from a health standpoint, and tell what the local laws require in this respect, and the extent to which they are enforced.
6. Tell how to plan and manage a small camp in a sanitary way.
7. State the reasons why school children should undergo a medical examination.
8. Tell how he may cooperate with the health authorities in preventing disease.
9. Describe different ways in which a person may become immune to infectious diseases.
10. Produce satisfactory evidence that he has rendered service in some effort recommended by the public health authorities in the interest of public health.

Public Speaking

To obtain this Merit Badge, a Scout must:

1. (a) Articulate correctly all the English speech

sounds;

(b) Pronounce distinctly and correctly according to a recognized authority, one hundred words in common use, generally mispronounced, and including words having the Italian A, words with long U, words with the dipthong OU or OW and words with the long OO;

(c) Use correctly each word in the list (b) in a sentence; pronouncing the same correctly and distinctly;

(d) Read aloud, correctly and distinctly, a newspaper editorial of about five hundred words.

2. (a) Make an original address of not less than five minutes' duration, before an audience of at least twenty-five persons, on some phase of Scoutcraft, demonstrating both physical and mental poise in the presentation of his subject;

(b) Be an active member of a debating team for at least six months prior to taking the test, and participate at least once, in a public debate as a member of the team;

(c) Describe orally any process, game, undertaking, experience, or proposed adventure, in as coherent a manner as might be expected in an essay written on the subject;

(d) From a list of five major events in our National History, describe orally, two, of his own selection, giving sufficient detail to show his general familiarity with the topic selected.

3. Demonstrate ability before his Counselor to give a satisfactory extemporaneous speech of at least two minutes' duration on a subject of interest to the Scout, selected by the Counselor.

4. (a) Organize at least fifteen persons into a parliamentary group for the conduct of business;

(b) Preside over the meeting and demonstrate a knowledge of the order of procedure in motions, and ability to decide and rule on points of order.

Radio

To obtain this Merit Badge, a Scout must:

1. Receive and send correctly a straight text at not less than five words (25 letters) per minute.

2. Know what, if any, licenses are required by Federal Law for the operation of (a) a receiving station; (b) a transmitting station.

3. Know at least five of the most frequently used "Q" signals. Explain the meaning of each.

4. (a) Draw a wiring diagram of a complete receiving set for use on short wave with vacuum tube detector and one stage amplifier. Use correct symbols and show all essential apparatus, including antenna and telephones. Describe each detail of apparatus and explain briefly the use of each.

(b) Using the above diagram, explain how this receiving set could be made to operate also as a miniature transmitter.

5. Construct a working receiving set and demonstrate its operation by receiving signals from at least ten different stations.

6. Explain how to install an antenna for use in receiving equipment and how to ground it properly and protect it against lightning and power wires.

NOTE: The holding of a first grade amateur operator's license and a regular or special amateur station license will exempt the holder from examination on all requirements above except 4. (a) and (b) and 5. Such licenses must be in force at the time the Badge is awarded.

Reading

To obtain this Merit Badge, a Scout must:

1. Have read at least twelve books* within the past year (not more than three of these from school outside reading requirements). The twelve books to include at least one each from three of the following classifications—fiction, adventure, Scouting, biography, technical or scientific reading, travel, poetry, or books on hobbies. Present list of books read and authors.

2. Indicate the places in his community or county from which he may borrow, rent, or purchase books, and present library card or other evidence of how he secured the books read in Requirement No. 1.

3. Develop a satisfactory bibliography from public or school library index, from publishers' catalog, government lists, or other source, on one of his hobbies or special interests, and include at least two of these among twelve books read in Requirement No. 1.

4. List the books he owns as a start toward a personal library.

5. Report on newspapers or news magazines he reads to keep posted on current events.

6. Be a subscriber OR a regular reader of a magazine* for at least the preceding six months. Report any other magazines read.

7. Locate and deliver reading matter to some shut-in or sick person; *or* help someone find books on his hobby; *or* render service to his school or public library; *or* perform some similar service.

Reptile Study

To obtain this Merit Badge, a Scout must:

1. Know what representative species of reptile (snakes, lizards, turtles, crocodiles) are found in his own

* *Must be approved by Counselor.*

state or locality. Be able to identify all these species.

2. Know distribution and typical life history of the crocodilians inhabitating the United States.

3. Be able to distinguish the poisonous reptiles of the United States.

(a) The one kind of poisonous lizard.

(b) Four kinds of poisonous snake, by shape, size, markings, heads, tails or by teeth (fangs).

(c) The location and operation of the fangs of the four kinds of snake.

(d) General distribution of the poisonous forms.

(e) Whether these poisonous snakes are aggressive or defensive, and how far they can strike.

4. Know eight harmless snakes, four of which feed on destructive rodents, and know the food of each. Know how they capture and eat their food, know something of the usefulness of the snake to man. Know how young snakes are produced—from eggs or living young; how and why a snake sheds its skin; why snakes are partly blind prior to shedding; the function of the snake tongue.

5. Know some of the important differences between the groups (snakes, lizards, turtles, crocodiles) as to (a) eyes, (b) ears, (c) teeth, (d) heart, (e) lungs, (f) limbs, (g) tails, (h) scales (shell).

6. (a) Know the typical life history of turtles, including where and when the eggs are laid, the number, color, shape and covering and period of incubation. Recognize and describe five kinds of turtle, one of which shall be edible; Or—

(b) Know the typical life history of lizards; how young are produced—from eggs or living young. Recognize and describe five kinds, preferably common to his own region. Know the common food of lizard and their usefulness to man in thus controlling pests. Know how and why a lizard will drop its tail and how it regrows.

7. Know the relative position of reptiles in the animal kingdom. Explain why, where and when reptiles hibernate, and the duration of the hibernation period.

8. Know what first aid treatment should be given in case of poison snake bite and the reasons for the same.

Rocks and Minerals

(Formerly Mining, which has been discontinued.)

To obtain this Merit Badge, a Scout must:

1. Make a general collection of at least twenty-five minerals and rocks, including varieties mounted for display or arranged in some orderly fashion in a proper box or container. Each specimen must be accompanied by a label giving the name of the specimen and its locality.

2. Be prepared to identify the minerals and rocks in your collection, telling in each case the characters which distinguish each specimen from the other specimens.

3. Prepare a special collection consisting of not less than 5 specimens which teaches some lesson about rocks and minerals, such as crystal form, color, streak, cleavage, hardness, fluorescence, etc. The collection must be mounted and labelled in such manner that it tells its own story. This collection shall be available as a Troop school, or fair exhibit when requested. (The collection may consist of local rocks and minerals illustrating the local geology; it may consist entirely of soil types; or may illustrate the formation of soil from rocks.)

Rowing

To obtain this Merit Badge, a Scout must first have met the Merit Badge requirements for Swimming, and must:

1. Row properly without assistance, but with Counselor in stern sheets:

(a) In a straight line for quarter of a mile, make turn to starboard in boat's length (pivot), and return to starting place.*

(b) Make port turn in boat's length, row quarter of a mile and backwater in straight line to starting place.*

2. (a) Launch and land a rowboat properly from and to shore.

(b) Bring rowboat alongside pier, properly assist a passenger into boat, row fifty feet, pivot, come back to pier, and assist passenger safely and properly from boat.*

(c) Make rowboat fast to pier properly, using clove hitch, two half hitches, and bowline.

3. Alone in a rowboat, shove off from shore or pier; approach swimmer simulating distress, and maneuver boat in such manner that swimmer may grasp and hold stern of boat while being towed ashore.

4. Sketch roughly: (a) Two of the following types of boat selected by his Counselor: Fisherman's Dory, St. Lawrence Skiff, Mississippi River John Boat, Ship's Long Boat, Punt, and Dinghy.

(b) Two of the following types of rowlock selected by his Counselor and give reason why pin rowlock is not desirable; tholepin, box rowlock, ring rowlock, open top rowlock.

5. Be generally familiar with rowing and rowboats and be able to explain clearly (in presence of Counselor and others if possible), how he would handle a rowboat if

caught in a sudden storm or high wind; the value of feathering oars; how to calculate number of persons who may safely be carried in any given life boat under oars; using U. S. Steamship Inspection formula; what lights are required on a rowboat at night, with and without outboard motor; how to put rowboat up for winter and prepare it for use in spring.

**Note*: Oars used must not be over 7½ feet long, and must be properly feathered on recovery after each stroke. Pin type rowlock may not be used. If a quarter mile straight-away is not available, shorter course may be used, Scout rowing back and forth in a straight line until a quarter mile has been traversed.

Safety

To obtain this Merit Badge, a Scout must:

1. Submit evidence of having satisfactorily done one of the following:

(a) Made a safety inspection of his home and premises, listed conditions which might prove dangerous, and taken practical measures to remedy at least two such conditions; *or*

(b) Actively shared in the safety work in school over a period of at least ten weeks and at all times done his best by example and attitude to interest his schoolmates in safety activities; *or*

(c) Built cabinet for the safe and proper storage of medicines and poisons; or kitchen cabinet for storage of lye, "lysol," ammonia, etc.; or suitable play pen for the baby, screening, if desired, for outdoor use; or gate guarding stairs for children; or safety rail for cellar stairs with painted white stripes on lowest step; or built and filled sandbox for slippery walks; or recommended a needed safety device for home or Troop and when approved by Counselor, made such device.

2. Demonstrate how he would make himself visible while walking on the road at night; explain on which side of the road he should walk, day or night, and why.

3. Demonstrate with a modern gun:

(a) The direction in which he should point the muzzle when picking it up and tell why;*

(b) Other safety precautions which should always be taken to avoid accident when handling a gun or passing it to another person, and tell why.*

4. Demonstrate, with a full size axe, the correct way to carry it safely;

(b) Demonstrate how to handle, carry, and store safely different kinds of farm tools such as scythe, sickle and pitch

fork, or sharp edged tools about the home or shop.

5. Demonstrate (a) with another boy, what action he would take, and tell why, in the following situation:

Some children have been playing with fire; the clothing of one becomes ignited;

(b) With two other boys, method he would use, (1) with a 20-foot rope, and (2) with a board, to rescue a fourth boy who had broken through the ice;

(c) How he would save himself if he had broken through the ice, and there were no help in sight.

6. Submit and comment on newspaper accounts which he has gathered within a period of the past six months describing at least three different kinds of accidents due to any of the following causes: (a) Stealing rides on automobiles or street cars; (b) Hitch hiking; (c) Crossing street or highway; (d) Reckless driving; (e) Failure to observe a traffic law.

7. Explain, in discussion with his Counselor, or dramatize with members of his Patrol, what he considers the main safety hazards involved in modern transportation, industry, recreation, and in the home, indicating general ways in which they should be met, including also ways for dealing with such specific problems as:

(a) Escaping gas; (b) wire dangling from electric line; (c) safe storage and use of gasoline; (d) running engine in closed garage; (e) three ways of turning in fire alarm, citing best local method and giving exact location of nearest fire alarm to his home or place of employment; (f) appearance of blasting caps, their use, and precautions against untimely explosion.

**Note*—This Requirement must be waived when it involves conflict with local or state law relating to ownership and use of firearms. In all other cases evidence must be produced that all practice and the test have been conducted under a range officer whose appointment has been approved by the Local or National Council. (This Requirement does not necessitate Scout's supplying gun.)

Salesmanship

To obtain this Merit Badge, a Scout must:

1. Analyze an article of merchandise from each of five retail stores, and make a report of what happens to each article of merchandise investigated from the time it leaves the manufacturer until it reaches the consumer.

2. Explain the value of a salesman between manufacturer and jobber, between jobber and retailer; or between manufacturer and retailer.

3. Sell a definite quantity of merchandise, the total sales value of which is in excess of $10.00, and give his actual selling experience, telling the methods he used to influ-

ence people to buy his merchandise, and how he overcame "selling resistance."

4. Indicate the place or importance of selling in business.

5. Explain how ideas are formed and how a salesman can lead a customer to decide to buy.

6. Sell at a profit something he has made or grown. Keep the necessary records to enable him to fix the right selling price and tell how much profit he has made.

7. Obtain, and hold for three months, a selling job for the hours after school, Saturday afternoons or vacation. Describe what is necessary to sell the things he handles.

8. In uniform, visit a business concern and learn how their product is sold. Describe the selling process. Take with him an outline of at least ten questions prepared in advance.

9. Name five fundamental requirements of successful salesmanship.

10. Go to some successful practical salesman in his community and find out what he thinks of selling as a life work. Write out in 500 words or more his conclusions of what the salesman tells him of salesmanship as a life work.

11. (a) Explain what he understands to be the meaning of the statement that "Every man is a salesman. He must sell himself, his time, his ideas, his service."

(b) Explain why Truthfulness about an article is one of the outstanding requirements of all good selling.

(c) Explain what it is that every salesman sells to his employer.

(d) Explain how courtesy to prospective customers aids selling.

(*Be prepared to give examples.*)

Scholarship

To obtain this Merit Badge, a Scout must:

1. Have been in attendance at school, (grammar, high, private or night school), for a period of at least one year since becoming a First Class Scout.

2. Present evidence from teacher or principal that during this period, (a) his attendance has been satisfactory, and (b) he has ranked in the upper third of his school in scholarship.

3. Present evidence that he has taken a satisfactory part in the life of his school.

4. Give evidence of at least five instances where his school training has been of value to him in Scouting and other activities or interests outside of school.

5. Give evidence that he has made use of educational resources other than those of his school, outlining at least five

instances where he has used such resources for self-education.

Sculpture

To obtain this Merit Badge, a Scout must:

1. Make a shaded drawing in pencil or charcoal of a cylindrical object and a rectangular object grouped together a little below the eye.

2. Model in clay or plastecine or soap two or more examples of Greek or Renaissance ornament, from a cast or model.

3. Make a copy in clay or plastecine, in full size, of a part of an antique statue, as a head, a hand, or a foot.

4. Make a statue "in the round" of a head, of life size, from a living model.

5. Make a study "in the round" of an animal or a group of animals.

Seamanship

To obtain this Merit Badge, a Scout must:

1. Using at least one inch (circumference) rope, demonstrate correct (a) whipping of rope, (b) coiling, and (c) flinging. Describe the characteristics of three different types of rope commonly used by seamen.

2. Using at least one inch (circumference) rope, make: (a) at least three kinds of knots used by seamen; (b) two bends; (c) two kinds of hitches; (d) a short splice; (e) and an eye splice. (Explain practical uses in seamanship of each type of knot, bend, hitch and splice demonstrated.)

3. Demonstrate on sail cloth use of palm and needle in making: (a) a herring-bone stitch and (b) both flat and round seams.

4. Demonstrate: (a) making a line fast to a cleat, ringbolt, and pile, correctly; (b) a simple whip; (c) a single block tackle; (d) a double block tackle. Describe and explain uses of: (a) a snatch block; (b) a becket.

5. Describe: (a) at least two kinds of anchors and (b) the uses and outstanding features of a lead line.

6. Box the compass to 32 points. Explain: (a) The quarter point and degree systems; (b) compass deviation; (c) compass variation. Know the importance of the North Star to seamen.

7. Have a working knowledge of: (a) weather and tides; (b) coast and geodetic survey charts. Understand buoyage system as used on coastwise harbors, rivers, and bays.

8. Know what lights and other equipment are required by law for: (a) a power-driven pleasure boat of Class 2; (b) a power-driven motor boat under 26 feet; (c) sailing vessels.

9. Understand proper flying of the ensign, jack, and two

other flags commonly used on commercial or pleasure craft.

10. Name the working sails of a schooner from bow to stern. Know the name of the line used for: (a) hoisting a sail or a flag; (b) for trimming a sail to make it set properly. Explain the following terms: starboard tack; port tack; running free; reaching; abaft; abeam.

11. Know: (a) what the danger sector is when two vessels are approaching; (b) what signals are used when a vessel is passing: (1) to left; (2) to right; (3) a sailing vessel lying at anchor in fog; (4) a power-driven vessel; (c) two types of distress signals commonly used at sea other than radio.

12. (a) Fully dressed (in shoes, trousers and jumper or coat), jump overboard in deep water, undress and, accompanied by a boat, swim 100 yards under supervision of Counselor. (b) Demonstrate proper use of life belt and life buoy.

13. Handle correctly some type of boat or canoe, under sail on all points of sailing, getting under way, reefing, docking, and anchoring.

14. Handle a rowboat (a) with a pair of oars; (b) with a single oar (sculling).

15. (a) Launch and land a rowboat or canoe properly from and to shore. (b) Bring rowboat or canoe alongside pier, properly assist a passenger into boat, row fifty feet, pivot, come back to pier and assist passenger safely and properly from boat. (c) Make rowboat or canoe fast to pier properly, using clove hitch, two half-hitches, and bowline.

Sheep Farming

To obtain this Merit Badge, a Scout must:

1. Explain the use of sheep for domestic purposes, for commerce and industry.

2. Attend a state or county fair, or state experiment farm and name and explain characteristics of 4 leading breeds of sheep shown. Explain which is his favorite and why.

3. Give origin and history of one breed of sheep.

4. Visit two meat markets and obtain information for making a drawing of a sheep, then mark off the meat grade sections of the animal.

5. Exhibit and explain four of the different grades of wool from sheep.

6. Explain what wool is used for, in home, commerce and industry.

7. Make an exhibit of pictures of at least five sheep breeds and show samples of wool produced by each.

OR

Comply with the 4-H Club or Home Project Requirements in Sheep Farming as follows:

1. Own a sheep.
2. Do all the work in its care and management for a season.
3. Keep accurate cost account and records as required by leaders.
4. Exhibit animal as required by state and county leaders in charge.
5. Make complete report at end of season or year as required by leaders and show profit or loss.

Signaling

To obtain this Merit Badge, a Scout must:
1. Make an electric buzzer outfit, wireless, blinker, or other signaling device.
2. Send and receive in the International Morse Code, by buzzer or other sound device, a complete message of not less than 35 words, at a rate of not less than 35 letters per minute.
3. Demonstrate an ability to send and receive a message in the International Morse Code by wigwag and by blinker or other light signaling device at the rate of not less than 20 letters per minute.
4. Send and receive by Semaphore Code at the rate of not less than 30 letters per minute.
5. Know the proper application of the International Morse and Semaphore Codes; when, where, and how they can be used to best advantage.
6. Discuss briefly various other codes and methods of signaling which are in common use.

Skiing

To obtain this Merit Badge, a Scout must:
1. Present himself properly equipped and clothed for skiing.
2. Know the Skiers' Safety Code.
3. Demonstrate ability to ski correctly on the level, with both the one step and two step, and demonstrate the proper use of poles.
4. Demonstrate ability to climb correctly using: (a) side step. (b) diagonal with both left and right kick turns, and (c) herringbone.
5. (a) Demonstrate correctly the double stembrake.
   (b) Do four continuous pure double stem turns.
6. Do a right and left Christiania turn to a standstill from a direct descent.
7. (a) Jump turn to the right and left; *or*
   (b) Telemark turn to the right and left.
8. Choose any 2 of the following:
   (a) Run a slalom course with no falls through four

pairs of flags, zig-zagged not more than forty feet apart, each set of flags requiring a ninety degree turn.

(b) Make a direct downhill or diagonal run of at least 100 yards under complete control.

(c) Make a 400-foot vertical ascent and descent under complete control with a pack of at least fifteen pounds.

(d) Demonstrate ability to jump by completing three successive no-fall jumps of not less than twelve meters.

9. Choose any 1 of the following:

(a) 1. Show how to make an emergency toboggan out of several pairs of skis with only such materials as one would have on a ski trip.

2. Explain treatment of frostbite.

(b) 1. Explain the correct method of waxing skis for different snow conditions.

2. Demonstrate ability to wax a pair of skis.

3. Describe care of skis during the off season.

(c) 1. Diagram a slalom course which will fairly test a skier's ability.

2. Explain rules and describe how a slalom race is run; *or* explain rules for and describe the conduct of a down-mountain race.

(d) Build a pair of skis, bindings, or poles.

SKIER'S SAFETY CODE

I will always try:

1. To ski under control, which means turning and stopping at will.
2. To have my ski bindings so that they hold my feet tightly to the skis.
3. To go skiing properly clothed and only under reasonable weather conditions.
4. To carry first aid and emergency ski equipment on all ski trips.
5. To ski only on terrain suited to my ability and to descend slopes only after I have studied them.
6. To make ski trips in groups of not less than four and always to remain in groups on a ski hike.
7. To have good trail manners and to respect the rights of skiers.

Soil Management

To obtain this Merit Badge, a Scout must:

1. Dig and exhibit samples of five different types of farm soil from garden or farm. (Bottle samples and name types of soil and where obtained.)
2. Explain fully the two best methods known for testing sour soils. (Demonstrate one of them.)
3. Give chemical composition of soil.
4. Explain the proper management of wet soils; draw and explain a simple drainage plan suitable for effective use on

a farm where soil is low and wet.

5. Explain fully three different methods used for maintaining soil fertility on a farm and the relation of weeds to soil management.

6. Plant four different legumes of value in soil building for his own state and locality.

7. Explain what the figures 4-8-4 mean when dealing with commercial fertilizers.

8. Find a nearby bank or slope or hillside on a farm, field, lawn, garden, school yard, park or playground, where soil erosion has started and show how to check further damage or how to control during crop season.

9. Demonstrate on a piece of ground (1) two different methods of preventing garden, lawn or soil from wearing out; (2) one method of reclaiming worn out soil.

Stalking

To obtain this Merit Badge, a Scout must:

1. Demonstrate by means of a stalking game or otherwise, ability to stalk skillfully in shelter and wind, etc., showing how to proceed noiselessly and "freeze" when occasion demands.

2. Know and recognize the tracks of ten different kinds of animals or birds in his vicinity, three of which may be domestic.

3. Submit satisfactory evidence that he has trailed two different kinds of wild animals or birds on ordinary ground far enough to determine the direction in which they were going, and their gait or speed. Give names of animals or birds trailed, their direction of travel, and describe gait or speed; or submit satisfactory evidence that he has trailed six different kinds of wild animals or birds in snow, sand, dust, or mud, far enough to determine the direction they were going and their gait or speed. Give names of animals or birds, their direction of travel, and describe gait or speed.

4. Submit satisfactory evidence that he has tracked a human being and deduced from the trail whether it was man or woman, young or old, the gait or speed, and also give any other information deduced.

5. Submit evidence that he has scored at least 30 points from the following groups: [Group (f) and 4 of the 5 groups (a), (b), (c), (d), (e) must be represented in the score of 30 and at least 7 points must be scored from (a), (b), or (c)].

Make clear recognizable photographs of:

(a) Live bird away from nest .....4 points each
(b) Live woodchuck or smaller wild animal..3 points each
(c) Live wild animal larger than woodchuck
4 points each

(d) Live bird on nest .....3 points each
(e) Tracks of live wild animal or bird.....2 points each
and
(f) Make satisfactory plaster cast of wild animal or bird tracks with identification imprint on back of cast
2 points each

Stamp Collecting

To obtain this Merit Badge, a Scout must:
1. Own and exhibit either of the following assortments personally collected by himself.
(a) 500 or more well-conditioned stamps including at least 50 different countries
OR
(b) 500 or more well-conditioned stamps from an individual country or group of countries in which he is specializing.
2. Exhibit one stamp from at least six of the following *groups*: surcharged, imperforate, perforate, precancelled, flat plate, rotary press, commemorative, envelope, semi-postal, occupation, provisional.
3. Exhibit and explain one stamp from at least six of the following *classifications*: postage, air mail, postage due, registration, parcel post, special delivery, revenue, private proprietary, war tax, newspaper, official.
4. Exhibit and explain cancellations and their relation to the value of a stamp, including each of the following:
(a) Pen.
(b) Office (town).
(c) Killer.
(d) Colored.
(e) "Tied to cover."
5. Explain the following terms used by stamp collectors:
(a) Wove, laid, granite, and silk paper.
(b) Water marks.
(c) Engraved, typographed, lithographed.
(d) Perforation, rouletting.
6. Exhibit the number indicated of each of the following issues of the United States: 10 different commemorative, 10 present issue, 4 present envelope, 1 memorial, 1 flat plate, 1 rotary press, and 3 different air mail stamps.
7. Demonstrate ability to "catalogue" accurately five stamps which are to be furnished by the Counselor.
8. Explain in full how the "condition" of a stamp affects its value.

Surveying

To obtain this Merit Badge, a Scout must:
1. Map correctly from the country itself the

main features of half a mile of road, with 440 yards each side, to a scale of two feet to the mile, and afterwards draw same map from memory.

2. Measure the width of a river.

3. Measure the height of a tree, telegraph pole, or a church steeple, describing the method adopted.

4. Be able to measure a gradient.

5. Understand the use of the plane table.

Swimming

To obtain this Merit Badge, a Scout must:

1. Swim 100 yards, using the following strokes in proper form:

(a) Side stroke for 50 yards,

(b) Back stroke for 25 yards (elementary),

(c) Crawl, or breast stroke for 25 yards.

2. Surface dive in 6 feet of water and recover object on bottom.

3. Tread water for one minute, using both hands and feet.

4. Rest motionless in the water, or as nearly so as possible, at any angle, for one minute.

5. Demonstrate a rescue in one of the following ways:

(a) Disrobe on shore, enter the water feet first (jump or run) carrying outside shirt in teeth or hand, swim 30 feet, swing one end of shirt to the hands of presumably drowning person and tow him ashore;

OR

(b) Make rescue under same conditions as above, using instead of shirt, a pole, branch of tree, paddle or oar to shove to presumably drowning person.

Taxidermy

To obtain this Merit Badge, a Scout must:

1. Have a knowledge of the game laws of the United States and the State in which he lives.

2. Preserve and mount the skin of a game bird, or animal, killed in season, and without violation of any law.

3. Mount for a rug the pelt of some fur animal.

Textiles

To obtain this Merit Badge, a Scout must:

1. Identify a piece of woolen cloth.

Identify a piece of worsted cloth.

Identify a piece of cotton cloth.

Identify a piece of silk cloth.

Identify a piece of artificial silk cloth.

Submit a collection of samples.

State how he would distinguish each of the above.

2. (a) Know the physical properties (appearance) in the raw state of wool, worsted, cotton, silk and artificial silk.

(b) Know how yarns made from these fibres differ in their character, and state the means by which he would distinguish between them.

3. Distinguish between a woven fabric and a knitted fabric, and state which wears the better and why.

4. State how wool, cotton and silk are grown, and name the principal sources of supply of each.

5. Outline the different operations that would be used in converting some fibre into cloth. Name the machines that would be used and the kind of cloth that would be made. Report whether data for this test are gathered from visits to a factory or from texts.

6. Produce a sample and tell what properties a good piece of cotton or woolen wearing-apparel should possess.

7. State what the size numbers of yarns signify. Illustrate with at least two samples.

8. State which fibres are easier to dye and which are harder, and explain why in each case.

9. Name the two principal sources of dyestuffs.

Weather

To obtain this Merit Badge, a Scout must:

1. Have a general knowledge of composition of the air, referring to both constant and variable elements of the air, and what function each performs.

2. Develop quite broadly the subjects, moisture, fog, hail, rain and snow.

3. Explain points connected with electrical and optical phenomena in the air, i.e., have a knowledge of the following: rainbow, mirages, looming, halos, Northern lights, St. Elmo's fire, lightning and thunder. Describe as many of the above as he has seen.

4. Have a knowledge of the use and construction of and demonstrate his ability to read a barometer, thermometer, anemometer, psychrometer and rain gauge. Have constructed a weather vane. Know the weather signals or storm signals.

5. Outline in writing a simple statement of the climate of the United States and of his own State.

6. Explain the value of weather prediction. Write a brief account of the United States Weather Bureau, stating what daily, weekly and monthly publications are sent out by this Bureau. Be able to interpret the charts and graphs contained in their publications.

7. Keep a daily record for a month of the following: Dew or frost in the morning; at a specific hour each day (this hour must be the same every day), the direction of the wind, the temperature, kind of clouds (if any) in the sky.

(State if it rains or snows at this hour.)

8. Name some places where, during severe thunder storms, the danger from lightning is great, some places where the danger is small.

Woodcarving

To obtain this Merit Badge, a Scout must:

1. Make, with only a knife for a tool, three handy camp articles, such as pot hooks, fork, spoon, tent pegs, coat hooks or candle holder, all articles to be made from natural material.

2. Plan and carve an appropriate design in low relief on some simple object such as book ends, a tray, a pair of bellows, a chest, a screen, a clock case, a letter opener, or a box.

3. State the qualities of hard wood and soft wood, and the best woods to use in woodcarving; name, describe, and explain how to sharpen the different kinds of woodcarving tools, including knife and axe, and explain methods of handling the grain of the wood in designing and carving.

Wood Turning

To obtain this Merit Badge, a Scout must:

1. Demonstrate the proper use of the roughing gouge, turning gouge, skew chisel and parting tool and know how to sharpen each.

2. Demonstrate the proper method of putting stock in the lathe and taking it out; between live and dead centers and on a face plate.

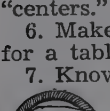
3. Have a general knowledge of wood turner's lathe, and know how to figure the speed at which the lathe is turning.

4. Have a general knowledge of an automatic wood turning lathe.

5. Turn a project using a face plate and one between "centers."

6. Make duplicate parts in a project such as four legs for a table or two candle sticks or bud vases.

7. Know how French polish is applied.



Wood Work

To obtain this Merit Badge, a Scout must:

1. Design and construct a small piece of furniture in which mortise and tenon or dowel joints are used, such as a tabouret, a small table, a chair, a foot-stool, a writing desk, etc.

2. Make plans or intelligent rough sketch drawing of the piece selected.

Zoology**

To obtain this Merit Badge, a Scout must:

1. Make five field trips of at least two hours each (preferably at different seasons) to observe wild animal life. Keep records of such trips, listing all animals seen, with date, place, nature of locality and observations of animals and their habits. (Photographs, sketches, track casts, etc., will add to the interest of this record.)

2. Using the "keys" of the modern system of classifying animal life, show ability to classify at least five animals of different phyla.

3. Find out the life processes that are common to all animal life (birth, self protection, feeding, breathing, etc.). Keep record from personal observation of the life cycle and habits of at least two animals of different phyla.

4. On a map of his locality (showing such things as forests, plains, streams, marshes, arid areas, etc.) indicate animals found in each habitat. Know what is being done in his State to protect wild animal life.

5. Carry out one of the following projects:

(a) Keep a young animal, (completely weaned from mother) such as a squirrel, white rat, rabbit, or guinea pig for at least three months. Keep a weekly diary of its habits, food requirements, gain in weight, general health, etc.

OR

(b) Maintain an aquarium or "toad pen" for at least three months. Stock from local ponds, streams, or marshes. Watch development from egg on, of frogs, toads, turtles, fish, or whatever animal he has chosen for special observation. Keep record of life cycle and habits.

OR

(c) Submit at least ten photographs or sketches based on his own observation of microscopic animal life in the field for a period of at least three months. Present at least three properly prepared slides of microscopic life.

Note: Animals, in the zoological sense, include all living organisms other than plant life, from amoeba up through man. However, since birds, snakes and insects are covered in other Merit Badge subjects, choose other examples of animal life for these requirements.

**Requirements effective January 1, 1942. Optional in 1941.

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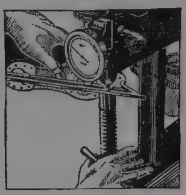

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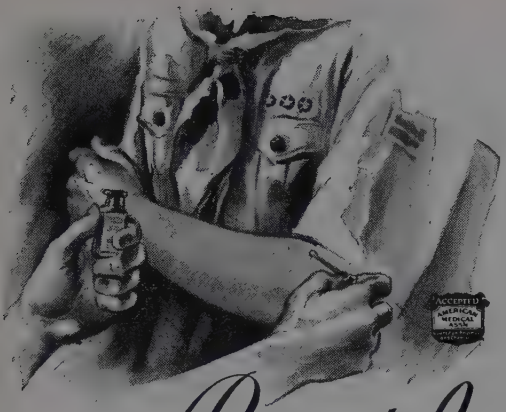

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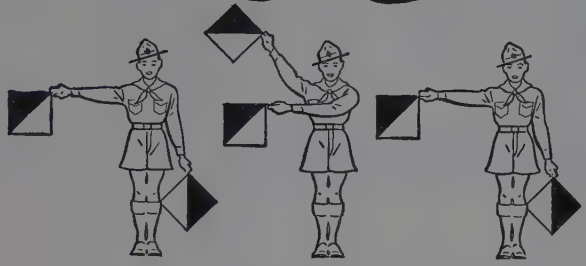

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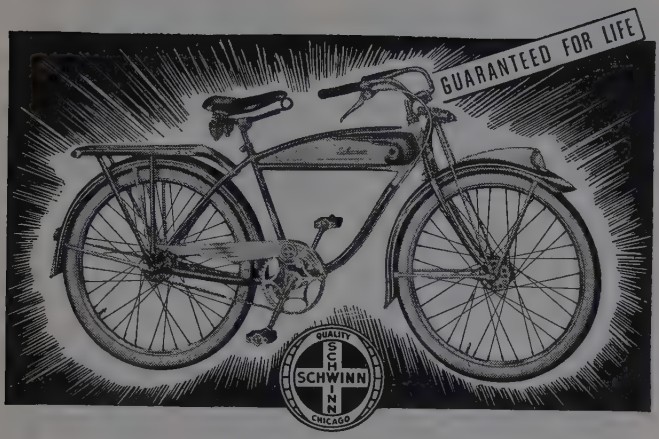

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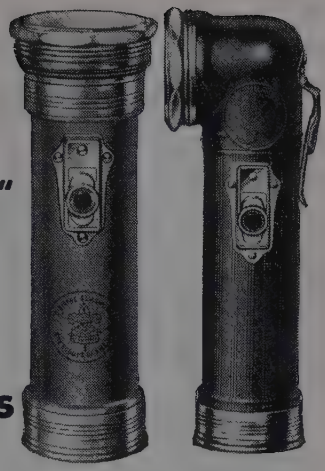

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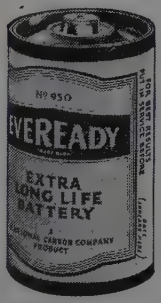

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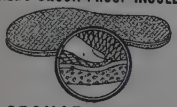

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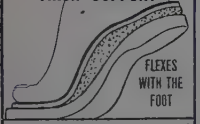

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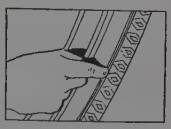
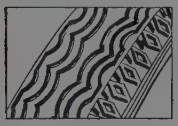
HOW to Judge a Good Bike Tire

CHOOSE THE TYPE YOU WANT... Light weight tires for speed and easy pumping—medium for general service—heavy service balloons for extra hard wear.



FEEL THE TIRE... A tire should be firm but supple. Gillette makes bike tires with the same care that is used in making the famous Gillette automobile tires.



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BUT ABOVE ALL... Look for the name Gillette on the tire. This is your guarantee of quality.

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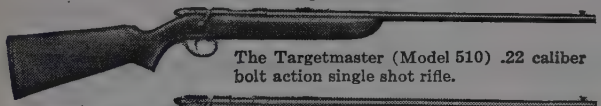

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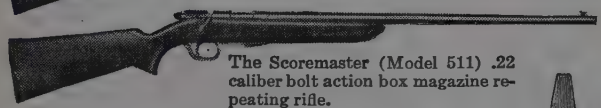

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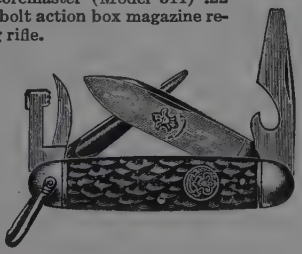

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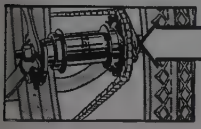

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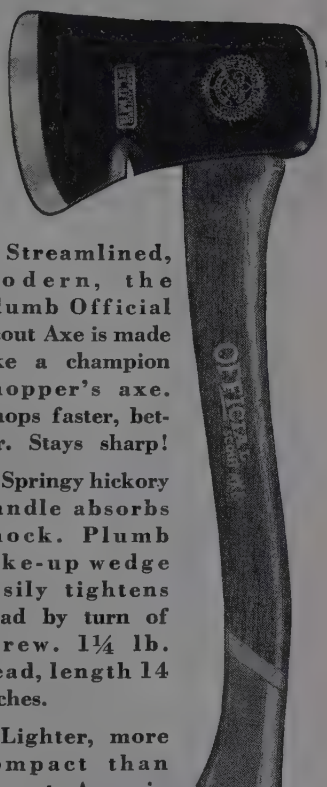

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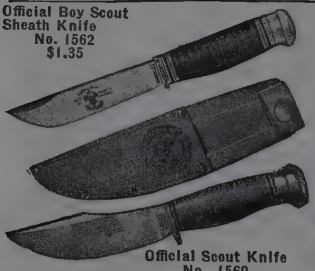

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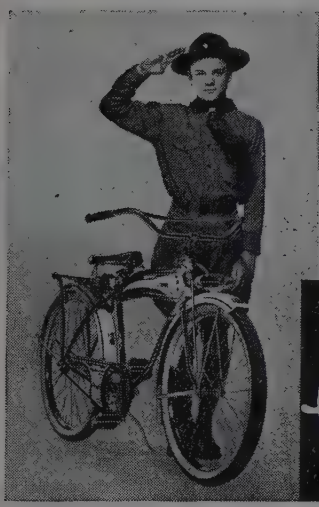

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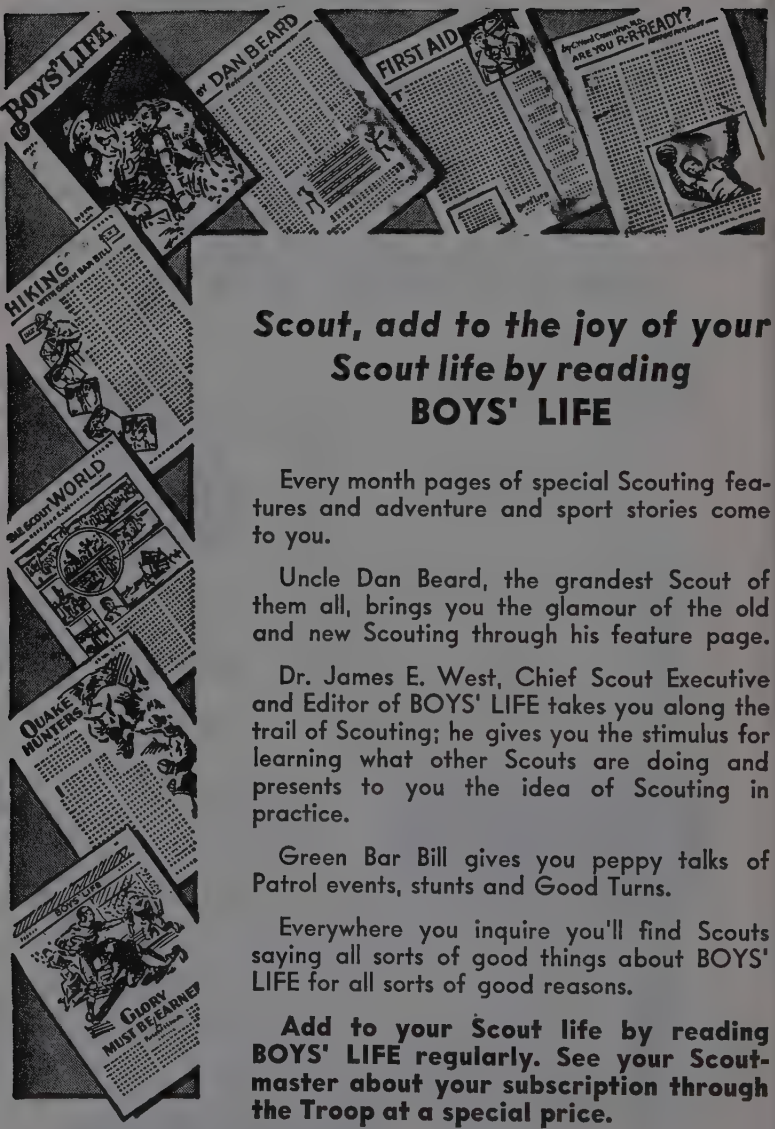

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Eveready Flashlights....651
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OFFICIAL EQUIPMENT YOURS ON THE COCOMALT PLAN

Ask your Scoutmaster

Here's important news for every Scout! Now you can get *—without charge*—Official Scout Uniforms . . . Official Scout Equipment . . . trips to Boy Scout Summer Camps. Think what a break this is for you! And here's how it is being made possible. The makers of COCOMALT and the National Office of the Boy Scouts of America in New York City are cooperating to bring you these things *at no cost to you!*

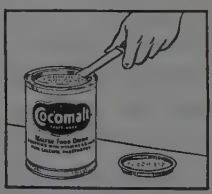
The Cocomalt Plan and How it Works . . .

Simply drink delicious, healthful COCOMALT, and tell your friends and relatives to do the same! Cut out and save the seal that is under the lid of every can. Soon you will have enough seals for the equipment you want.

HOW TO CUT OUT SEAL

1. *Pry off lid from a new can of* COCOMALT

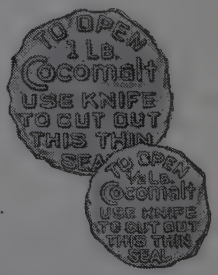
2. *Under the lid you will find a thin seal*



3. *Cut out this entire seal with a knife*

TABLE OF SEAL VALUES

Seal from ½ lb. can = 1 unit
Seal from 1 lb. can = 2 units
Seal from 5 lb. can = 8 units



YOUR SCOUTMASTER can get you a KEY TO THE OFFICIAL SCOUT EQUIPMENT CATALOGUE... which lists the items of Official Equipment, and tells how many COCOMALT units you need for each item. Ask him to write now...to get one for every member of your Troop.

R. B. DAVIS CO., Hoboken, N. J.

GET EQUIPMENT THE COCOMALT WAY!

OFFICIAL BOY SCOUT EQUIPMENT

When you stop to think that if each of our more than 1,300,000 Scouts and Scouters spends only one dollar each year on Scout equipment of all kinds, it means a total of more than $1,000,000.

From this, you will quickly understand how necessary it is that there should be a National Supply Service to see to it that Scouts can get their money's worth from such an expenditure.

Your Supply Service is a great Service Department of the Boy Scout Movement, created to help Scouts save money in buying the things they need in Scouting.

Great care is taken in the selection of your equipment. Before an article is adopted for Boy Scout use, it is given tests by experts to see that it is the best to stand the use you will give it. If the article comes up to our rigid standards, a price is established to give you one hundred cents value on your dollar.

THE PRICES OF THE ITEMS ON THE FOLLOWING PAGES MAY CHANGE FROM TIME TO TIME. CHECK FIRST WITH YOUR LOCAL SCOUT DISTRIBUTOR OR THE BOY SCOUT CATALOG.

SOLD THROUGH YOUR LOCAL SCOUT DISTRIBUTOR

If not stocked by your Distributor
Order by mail from

Boy Scouts of America

2 PARK AVE. » NEW YORK
231 SOUTH GREEN ST. » CHICAGO
755 MARKET ST. » SAN FRANCISCO

UNIFORMS

BOY SCOUT HAT

Low crown; wide brim; silk band embroidered with Scout insignia. Sizes 6⅞ to 7¾.

No. 503 $1.95

NECKERCHIEFS

Plain color, each, 50c
Combination color, each, 60c

NECKERCHIEF SLIDES

In color, each, 10c
(In ordering Neckerchiefs and Slides, please give color wanted)

Shirt and Breeches

Outdoor Service Outfit

UNIFORM PARTS

No. 648 SHIRT	$1.60
No. 651 BREECHES	1.95

OUTDOOR SERVICE OUTFIT

No. 503 HAT	$1.95
No. 687 SHIRT	1.25
No. 511 SHORTS	1.50
No. 528 STOCKINGS	.50
PLAIN NECKERCHIEF AND SLIDE	.60
No. 529 BELT	.50

SOLD THROUGH YOUR LOCAL SCOUT DISTRIBUTOR

RAINCOAT

BOMBAZINE RAINCOAT

Smart and trim, this military style, full double-breasted coat with raglan shoulders and Official Scout buttons is a hit with Scouts from coast to coast. Its convertible collar, all-around belt and patented buckle give it a distinctive style.

No. 571 **$5.95**

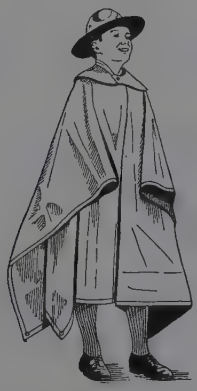
LUMBERJACK

NEW OFFICIAL LUMBERJACK

Made of heavy 22-oz. all-wool plaid mackinaw cloth in harmonious color combination of maroon, gray and black. Two large side pockets.

No. 599 **$5.50**

PONCHO



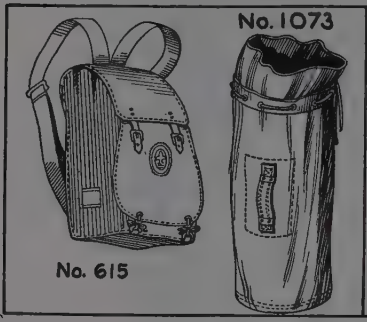
OFFICIAL BOMBAZINE PONCHO

Double texture olive drab poncho of bombazine material. Ball and socket fastener on collar and snappers on sides give adequate protection and complete freedom of movement on the stormiest of days.

No. 531 **$3.00**

SOLD THROUGH YOUR LOCAL SCOUT DISTRIBUTOR

PACKS



OFFICIAL CAMP-O-SACK

The pack sack adopted for the American Contingent in the 1929 Boy Scout Jamboree. Made of heavy khaki duck. Size 16" high, 15½" wide, 5½" thick.

No. 615 **$3.50**

OFFICIAL DUFFEL BAG

Made of waterproof khaki duck. Size 12" x 35".

No. 1073 **$1.75**

HAVERSACK–CANTEEN

OFFICIAL HAVERSACK

Made of pliable canvas material. Size 18" high; 13" wide and 4½" thick. Most popular Scout pack

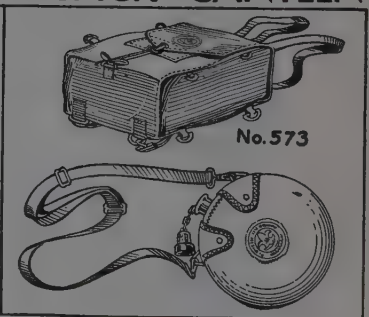
No. 573 **$1.95**

OFFICIAL CANTEEN

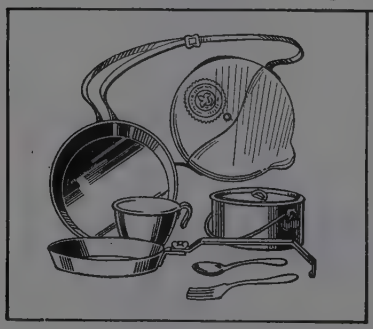
Made of heavy seamless aluminum. Enclosed in a removable khaki felt cover. Capacity little over one quart.

No. 1466 "WEAREVER" **$2.50**

No. 1202 "MIRRO" **2.50**



MESS GEAR



OFFICIAL COOK KIT

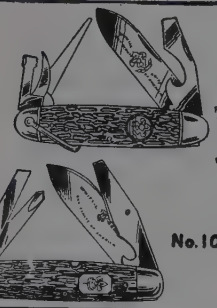
Made of heavy seamless aluminum. Parts nestle and lock together. Do not rattle. Khaki carrying case.

No. 1200 "WEAREVER" **$2.50**

No. 1199 "MIRRO" **2.50**

SOLD THROUGH YOUR LOCAL SCOUT DISTRIBUTOR

KNIVES



OFFICIAL BOY SCOUT KNIFE

Stag handle; heavy cutting blade; screw driver; bottle and can opener; punch blade.

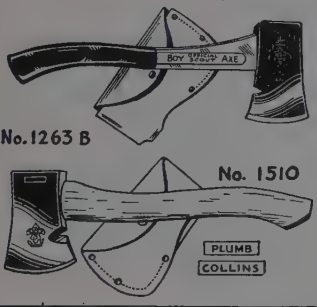
No. 1496 "REMINGTON" $1.50
No. 1585 "UNIVERSAL" 1.50

WHITT-L-KRAFT KNIFE

Excellent for whittling, carving, cutting and all other handicraft work. Has four blades.

No. 1087 $1.50

AXES



OFFICIAL SAF-T-HED AXE

High-tempered head has extra-sharp blade and hammer-width pounding surface. Head and handle are designed from one piece for safety. Weight: 2 lb. Length: 13". Comes with sheath.

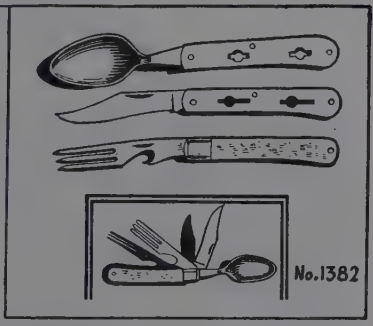
No. 1263 "VAUGHAN & BUSHNELL" $1.95

OFFICIAL AXE

Head made of one piece solid steel. Complete with leather sheath.

No. 1510 "PLUMB" $1.70
No. 1507 "COLLINS" 1.70

"KA-BAR EATING SET"



"KA-BAR" EATING SET

A three-piece combination set. Can be folded and fastened together in the shape of a pocket knife when not in use. Practical. Compact. Length, closed: 3¾".

No. 1382 $1.95

SOLD THROUGH YOUR LOCAL SCOUT DISTRIBUTOR

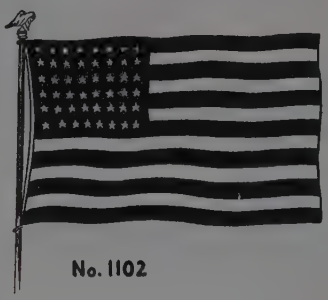
FLAG of the U. S.

UNITED STATES FLAGS

Best quality wool bunting. Stars sewed on both sides. Canvas heading with teeth grommets. Four sizes. Pole and Eagle extra.

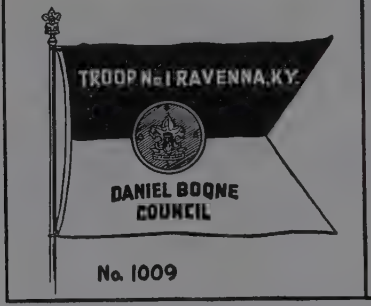
No. 1155 SIZE 2′ X 3′	$2.00
No. 1102 SIZE 3′ X 5′	3.50
No. 1103 SIZE 4-1/3′ X 5½′	5.50
No. 1104 SIZE 5′ X 8′	6.95

Also available in cotton bunting.



No. 1102

TROOP FLAG



No. 1009

TROOP FLAGS

Superior wool bunting. Red upper half, white lower with Official design in green and gold. Every Troop should have one. Cost of the lettering, poles and emblem are extra.

No. 1009 SIZE 22″ X 36″	$2.00
No. 1005 SIZE 3′ X 5′	3.95
No. 1010 SIZE 4-1/3′ X 5½′	5.50

Also available in cotton bunting and rayon.

PATROL FLAGS

PATROL FLAGS

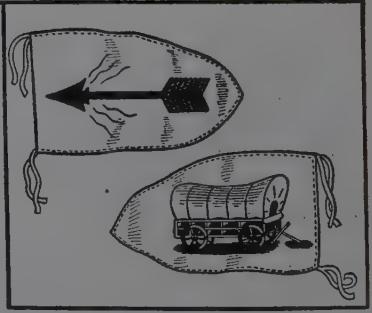
Many different Patrol flag designs, as shown, painted in red on both sides of white muslin. Size 12″ x 19″ with tie tapes. See catalog for complete list of designs. Order by Patrol name.

No. 1011 EACH **25c**

PATROL FLAG POLE

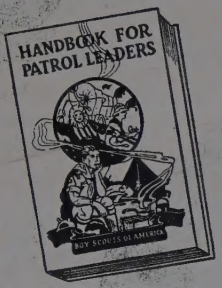
6′ Ash pole of two sections with brass screw joint.

No. 1115 **50c**



SOLD THROUGH YOUR LOCAL SCOUT DISTRIBUTOR

FOR PATROL LEADERS



HANDBOOK FOR PATROL LEADERS

In this book the author shows how leadership can be developed, illustrating his points with examples from everyday Scout experiences. The book discusses the Patrol Leader's job; Patrol spirit and organization; Patrol meetings; how to teach Scout requirements and Scout activities; Patrol Hikes and Camps; Handicraft; Stunts and Relationships.

No. 3638 **60c**

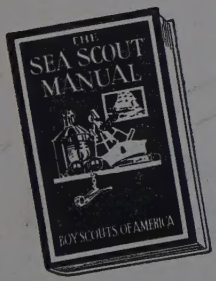
FOR SENIOR SCOUTS

ADVENTURING FOR SENIOR SCOUTS

An inspiring book for Senior Scouts that is really worthwhile. Contains a wealth of information on Sea Scouting, Explorer Scouting and Rover Scouting. A book of the Out-of-Doors; with suggestions for fun, outings, explorations, social activities, and service. Fully illustrated with photographs, drawings and diagrams.

No. 3639 **$1.00**

FOR SEA SCOUTS



SEA SCOUT MANUAL

A complete authentic text-book on Seamanship. Navigation and ship routine in plain, simple language. Contains valuable material on First Aid, Swimming and Life Saving. There are also complete sea history, a fascinating section of Sea Scout chanteys and a nautical dictionary. Profusely illustrated.

No. 3229 **60c**

SOLD THROUGH YOUR LOCAL SCOUT DISTRIBUTOR

GERBERICH-PAYNE SHOE CO. MT. JOY, PA.
BOY SCOUTS OF AMERICA
OFFICIAL SHOE

Scout Style 922 Official Boy Scout Brown Elk Moccasin Oxford, Rawcord Soles, Rubber Heels.

BE CORRECTLY UNIFORMED

Wear the Official Boy Scout shoe made by the makers of the most popular line of boys' shoes in America. Gerberich-Payne shoes are especially designed to give what every boy wants—easy comfort, good leather and smart snappy looks. Ask for them by name and insist that all shoes bear this Official Scout insignia on the heel pads.

Official BOY SCOUT SHOE
manufactured by GERBERICH PAYNE SHOE CO

INSIST THAT ALL SHOES BEAR THIS

OFFICIAL STAMP ON ALL HEEL PADS

GERBERICH-PAYNE SHOE Co

MOUNT JOY, PENNSYLVANIA.

THE SEAL PROTECTS YOU

Stamped only on authorized Official Boy Scout Uniforms

The Seal is your complete protection in buying and wearing the Official Boy Scout Uniform. Cubs and Scouters, too.

When buying the Uniform . . . the Seal is your guarantee that the Uniform is Official, that the cloth, seams and buttonholes, all have been thoroughly tested and approved by Uniform experts of the Boy Scouts of America and your local Scout Dealer.

When wearing the Uniform . . . the Seal is your assurance that the cloth won't suddenly wear thru, the seams won't let go, the buttons won't fly off. Altogether, you can rest assured, once the Seal is on, your worries are needless. The Official Seal protects you.

BOY SCOUTS OF AMERICA · NATIONAL COUNCIL · NEW YORK CITY

NO GRIP

NO RIP

NATIONAL SUPPLY SERVICE

BOY SCOUTS OF AMERICA

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Merit has its own reward.
More Boy Scouts ride on U.S.
Tires than any other kind.
UNITED STATES RUBBER COMPANY
US
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